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Date: January 23, 2025

Jamie Nielsen
Kentucky Department for Environmental Protection
Director, Division of Waste Management
300 Sower Blvd
Frankfort, KY 40601

Re: AI 3319, Wilson Landfill II, GWMCAR per 257.90(e)

Dear Ms Nielsen,

Please accept this GWMCAR prepared in accordance with 257.90(e) of 40 CFR Part 257 and 261 of the USEPA CCR Rule.

If you have any questions, please contact Diana Merritt at 270-748-0565 or email diana.merritt@bigrivers.com.

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of true and imprisonment for such violations."

Best Regards,

DocuSigned by:
A handwritten signature in black ink that reads "Matt Granderson".
A2C719C8E358460...

Matt Granderson,
Plant Manager, Big Rivers Electric Corporation, D.B. Wilson Station





BIG RIVERS ELECTRIC CORPORATION

2024 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT – WILSON PHASE II LANDFILL

**BIG RIVERS ELECTRIC CORPORATION D.B.
WILSON GENERATING STATION**

PROJECT NO. 171134

JANUARY 28, 2025



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List of Abbreviations

Abbreviation	Term/Phrase/Name
ACM	Assessment of Corrective Measures
BREC	Big Rivers Electric Corporation
CCR	Coal Combustion Residuals
CCR Rule	Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals (CCR) from Electric Utilities; Final Rule, dated April 17, 2015, amended July 30, 2018, and on September 28, 2020
CFR	Code of Federal Regulations
CiP	closure in place
GWAP	Groundwater Assessment Plan
GWPS	groundwater protection standard
IC	institutional control
KAR	Kentucky Administrative Regulation
KDWM	Kentucky Department for Environmental Protection, Division of Waste Management
LCL	lower confidence limit
Report	<i>2024 Annual Groundwater Monitoring and Corrective Action Report</i>
SSI	statistically significant increase
SSL	statistically significant level
TDS	total dissolved solids
Unit	Wilson Phase II Landfill
USEPA	United States Environmental Protection Agency
Wilson Station / Facility / Site	D.B. Wilson Generating Station located in Ohio County, Kentucky



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1.0 Executive Summary

This *2024 Annual Groundwater Monitoring and Corrective Action Report* summarizes groundwater monitoring and corrective action activities completed between January 1 and December 31, 2024, at the Big Rivers Electric Corporation (BREC) D.B. Wilson Generating Station (Wilson Station / Facility / Site) Phase II Landfill (the Unit) as required by 40 Code of Federal Regulations (CFR) §257.90(e) of the United States Environmental Protection Agency Coal Combustion Residuals (CCR) Rule. A figure of the Site illustrating the location of the Unit is presented as **Figure 1**. The program groundwater monitoring network for the Unit, including supporting characterization and water level only monitoring wells are summarized in **Table 1** and illustrated on **Figure 2**.

Results of baseline groundwater monitoring performed in 2016 and 2017 indicated that the Unit would require initiation of assessment monitoring under the CCR Rule, as most of the Appendix III constituents, excluding fluoride and pH, have downgradient statistically significant increases (SSIs) over background. On February 5, 2018, BREC posted a formal notification on their publicly accessible CCR reporting website that the Unit would transition from baseline detection to an assessment monitoring program. On October 26, 2018, BREC posted a formal notification on their publicly accessible CCR reporting website that one or more Appendix IV constituents were detected at statistically significant levels (SSLs) above the established groundwater protection standards (GWPS) as required by 40 CFR §257.107(h)(6). On January 14, 2019, BREC posted a formal notification on their publicly accessible CCR reporting website that the Wilson Phase II Landfill would initiate an Assessment of Corrective Measures (ACM) per 40 CFR §257.95(g)(5), fulfilling the requirement of 40 CFR §257.107(h)(7). In June 2019, BREC finalized the ACM in which applicable remedial technologies to address cobalt impacts in groundwater were identified pursuant to Title 40 CFR §257.96. A report summarizing the results of the ACM (AECOM, 2019b) was posted to BREC's publicly accessible CCR reporting website on July 10, 2019. A public meeting has not been held to date to discuss the results of the ACM for the Wilson Phase II Landfill. BREC is working to establish a comprehensive list of data collection needs to proceed forward with remedy evaluation for the Unit and anticipates providing additional data in future semi-annual remedy selection progress reports.

Groundwater analytical data collected during assessment monitoring at the Unit indicated that Appendix IV constituents were detected in downgradient compliance monitoring wells at SSLs over background. Per CCR Rule requirements, GWPSs for each Appendix IV constituent were developed and the data were statistically tested for whether the concentrations represented SSLs above their respective GWPSs. SSLs identified at monitoring wells in the current annual reporting period are as follows:

- Cobalt: MW-10

Other activities and conditions for the 2024 annual reporting period include:

- Semi-annual assessment groundwater monitoring events were performed in April and September/October 2024.
- No program transitions (detection to assessment or vice versa) were triggered; Unit remains in assessment monitoring.

Anticipated activities for the next 2025 annual reporting period include:

- Completion of two semi-annual assessment groundwater monitoring events.
- Progress towards selection of a remedy for the Unit.



2.0 Introduction

At the request of Big Rivers Electric Corporation (BREC), Burns & McDonnell prepared this *2024 Annual Groundwater Monitoring and Corrective Action Report* (Report) for the BREC D.B. Wilson Generating Station (Wilson Station / Site / Facility) Phase II Landfill (the Unit), located in Ohio County, Kentucky. This Report was prepared in accordance with §257.90(e) of 40 Code of Federal Regulations (CFR) Part 257 and 261 of the United States Environmental Protection Agency (USEPA) Coal Combustion Residuals (CCR) Rule. The CCR Rule was established to regulate the disposal of CCR produced by electricity generating facilities (USEPA, 2015; USEPA, 2018; USEPA, 2020a; and 2020b).

This Report summarizes all activities related to the CCR Rule groundwater monitoring program at the Unit in 2024. The following sections present a site background summary, a discussion of groundwater monitoring activities performed, a summary of laboratory results, statistical evaluation findings, and conclusions regarding uppermost groundwater conditions in the aquifer system subject to monitoring under the CCR Rule.

2.1 Purpose and Scope

This Report has been prepared per 40 CFR §257.90(e) to document the status of the groundwater monitoring and corrective action program at the Unit, summarize key actions completed, describe any problems encountered, discuss any actions to resolve the problems, and provide key activities for the upcoming year. This document is the eighth annual Report for the Unit.

2.2 Site Description

The Wilson Phase II Landfill is located in Ohio County approximately 5 miles northwest of the town of Centertown, Kentucky (see **Figure 1**). The Unit is located northwest and adjacent to Wilson Station. The current Wilson Phase II Landfill footprint is approximately 92 acres (see **Figure 2**). Adjacent to the Phase II Landfill to the east is the Wilson Station Phase I Landfill, which is currently being regulated by Special Waste permit by the Kentucky Division of Waste Management (KDWM) under Title 401 Kentucky Administrative Regulation (KAR) Section 45. The Wilson Phase II Landfill is currently active and raised above adjacent ground to a maximum elevation of approximately 532 feet above mean sea level. The original ground surface within the landfill footprint was an irregular post coal mining reclaimed surface.

2.3 CCR Rule Program Monitoring Well System

2.3.1 Compliance Monitoring Wells

Prior to the implementation of the CCR Rule, a groundwater monitoring well network was already present at the Unit in compliance with the requirements of the facility's operating permit. The existing monitoring wells are located along the perimeter of the permitted footprint for the Wilson Phase II Landfill and meet the CCR Rule requirements that downgradient monitoring wells must be located at the waste boundary of the (active) CCR unit, or as close as practicable.

Under the requirements stated in the operating permit, five (5) monitoring wells (MW-5, MW-6, MW-7, MW-8, and MW-10) were installed adjacent to the Wilson Phase II Landfill to determine the general direction of groundwater movement and to monitor groundwater at the Site. Monitoring Well MW-8 is located north of the landfill and is considered upgradient. Monitoring Wells MW-5, MW-6 (both west of the landfill), MW-7 (southwest of the landfill), and MW-10 (south of the landfill) are considered downgradient compliance monitoring wells located near the waste boundary of the Unit. As-built construction details of

each monitoring well are summarized in **Table 1**. The locations of the groundwater monitoring wells are shown on **Figure 2**. Each well has a dedicated bladder pump and tubing system installed for sampling purposes.

As stated in the CCR monitoring well network certification, the stratigraphic interval considered as the most prominent water-transmitting zone within and adjacent to the Wilson Station is material identified as reclaimed surface coal mining spoil material comprised of disrupted consolidated sandstone and shale of the Carbondale Formation. The United States Geological Survey Geologic Map of the Equality Quadrangle (Goudarzi, G.H., 1969) describes underlying Carbondale Formation bedrock as “Sandstone, siltstone, shale, coal and underclay: Sandstone, light- to medium-gray, fine-grained, massive, micaceous, locally grades into thin-bedded siltstone. Siltstone, light- to medium-gray and yellowish-brown. Shale, light- to dark-gray and brown, locally carbonaceous, in places calcareous and fossiliferous; contains sideritic nodules and lenses. Number 9 coal bed at base of the Unit averages about 4 feet thick.” For purposes of compliance with the CCR Rule groundwater monitoring requirements, this disrupted sequence comprising the unconsolidated mine spoil is considered the uppermost aquifer underlying the Wilson Phase II Landfill.

Details about the monitoring network are presented in the *Monitoring Well Completion Report* (Associated Engineers, Inc., 2009). Monitoring Wells MW-1, MW-2, MW-3, and MW-4 and Piezometers P-9 and P-11 are included in the CCR program as “water level only” monitoring points.

No new CCR Rule compliance monitoring wells were installed in 2024.

2.3.2 Characterization Monitoring Wells

To address the CCR Rule assessment monitoring program requirements of 40 CFR §257.95(g)(1) at the Wilson Phase II Landfill (permitted as a CCR Landfill), five (5) characterization monitoring wells (MW-102, MW-104, MW-105, MW-110, and MW-4D) were installed in October 2018 for the characterization of groundwater at locations indicated on **Figure 2**. A *Monitoring Well Construction Progress Report* (AECOM, 2019c), included as Appendix B in the *2019 Annual Groundwater Monitoring and Corrective Action Report* (AECOM, 2020), was prepared to summarize the monitoring well installation activities and submitted to the KDWM.

In accordance with the KDWM-approved *Groundwater Assessment Plan* (GWAP; Burns & McDonnell, 2021) to address the KDWM requirements of 401 KAR Chapter 45 Special Waste Section 160 (KAR 45:160) at the Phase I Landfill (permitted as a Special Waste Landfill), six (6) new characterization monitoring wells (MW-10D, MW-105R [replaced abandoned MW-105], and MW-111 through MW-114) in December 2021 through January 2022 for the characterization of groundwater at locations indicated on **Figure 2**. A *Monitoring Well Construction Progress Report* (Burns & McDonnell, 2022a), included as Appendix B in the *2022 Annual Groundwater Monitoring and Corrective Action Report* (Burns & McDonnell, 2023a), was prepared to summarize the monitoring well installation activities and submitted to the KDWM.

No new characterization monitoring wells were installed in 2024.

As-built monitoring well construction details and location of each characterization well are summarized in **Table 1** and illustrated on **Figure 2**, respectively. The characterization monitoring wells, located at cross-gradient and downgradient positions east, southeast, south, southwest, and west of the Unit (away from the CCR waste boundary), assist in the characterization of the existence, quality, quantity, areal extent, and depth of groundwater degradation, and the rate and direction of migration of CCR contaminants in the groundwater. The data generated from the ongoing groundwater assessment under 401 KAR 45:160 (Phase I Special Waste Landfill) and 40 CFR §257.95 (Phase II CCR Landfill) are critical

to the development of a comprehensive site conceptual model for groundwater, which is needed to evaluate the appropriate remedy for the Wilson Phase II Landfill groundwater impacts.



3.0 Groundwater Monitoring Activities and Results

3.1 Description of the Groundwater Monitoring Program

Results of baseline groundwater monitoring performed in 2016 and 2017 indicated that the Unit would require initiation of assessment monitoring under the CCR Rule, as most of the Appendix III constituents, excluding fluoride and pH, had downgradient statistically significant increases (SSIs) over background. On February 5, 2018, BREC posted a formal notification on their publicly accessible CCR reporting website that the Unit would transition from baseline/detection to an assessment monitoring program, fulfilling the requirement of 40 CFR §257.107(h)(4). On October 26, 2018, BREC posted a formal notification on their publicly accessible CCR reporting website that one or more Appendix IV constituents were detected at statistically significant levels (SSLs) above the established groundwater protection standards (GWPS) as required by 40 CFR §257.107(h)(6). On January 14, 2019, BREC posted a formal notification on their publicly accessible CCR reporting website that the Wilson Phase II Landfill would initiate an Assessment of Corrective Measures (ACM) per 40 CFR §257.95(g)(5), fulfilling the requirement of 40 CFR §257.107(h)(7). In June 2019 BREC finalized the ACM in which applicable remedial technologies to address Appendix IV cobalt impacts in groundwater were identified pursuant to Title 40 CFR §257.96. The ACM (AECOM, 2019b) was posted to BREC's publicly accessible CCR reporting website on July 10, 2019. A public meeting has not been held to date to discuss the results of the ACM for the Wilson Phase II Landfill. BREC is working to establish a comprehensive list of data collection needs to proceed forward with remedy evaluation for this unit and anticipates providing additional data in future semi-annual remedy selection progress reports.

In 2024, the Unit was in assessment monitoring status. Two groundwater sampling events were conducted at the Unit in 2024, fulfilling the assessment monitoring and characterization sampling requirements of the CCR Rule. The dates of the sampling events and the monitoring wells included in each event are summarized in the table below.

Event Type	Sampling Event	Dates	Monitoring Wells Sampled
Assessment	22	April 16-17, 2024	Background (Upgradient) MW-8 Downgradient MW-5, MW-6, MW-7, and MW-10
Characterization	12	April 16-17, 2024	Characterization Wells MW-4D, MW-10D, MW-102, MW-104, MW-105R, MW-110, MW-111, MW-112, MW-113, and MW-114
Assessment	23	September 30 & October 1, 2024	Background (Upgradient) MW-8 Downgradient MW-5, MW-6, MW-7, and MW-10



Event Type	Sampling Event	Dates	Monitoring Wells Sampled
Characterization	13	September 30 & October 1-2, 2024	Characterization Wells MW-4D, MW-10D, MW-102, MW-104, MW-105R, MW-110, MW-111, MW- 112, MW-113, and MW-114

Following the October 2024 sampling event, a total of 23 assessment monitoring events and 13 characterization monitoring events have been performed at Wilson Phase II Landfill since 2016. These events were reported on in the following:

- *2016-2017 Annual Groundwater Monitoring and Corrective Action Report* (AECOM, 2018);
- *2018 Annual Groundwater Monitoring and Corrective Action Report* (AECOM, 2019a);
- *Assessment of Corrective Measures under the CCR Rule* (AECOM, 2019b);
- *2019 Annual Groundwater Monitoring and Corrective Action Report* (AECOM, 2020);
- *2020 Annual Groundwater Monitoring and Corrective Action Report* (AECOM, 2021);
- *2021 Annual Groundwater Monitoring and Corrective Action Report* (AECOM, 2022);
- *2022 Annual Groundwater Monitoring and Corrective Action Report* (Burns & McDonnell, 2023a);
and
- *2023 Annual Groundwater Monitoring and Corrective Action Report* (Burns & McDonnell, 2024a).

Monitoring wells were sampled in accordance with low-flow sampling techniques developed and incorporated into current operating permits, which are maintained within the operating record at the Wilson Station.

3.2 Groundwater Sampling Activities

In 2024, two assessment monitoring events and two characterization sampling events were conducted at the Unit as part of assessment monitoring and characterization sampling activities. The two characterization sampling events coincided with the semi-annual assessment monitoring program schedule under 40 CFR §257.95 (Wilson Phase II Landfill). These semi-annual groundwater sampling events were performed by BREC personnel on April 16 and 17, 2024, and September 30, and October 1 and 2, 2024.

Prior to the semi-annual sampling events, the depth to groundwater was gauged at each of the monitoring wells on March 29th and September 27th using a decontaminated water level meter. The measured depth to groundwater level data and the calculated groundwater elevations during the 2024 monitoring events are summarized in **Table 2**.

Prior to groundwater sample collection, monitoring wells were purged using dedicated bladder pumps and low flow purging/sampling techniques. Monitoring wells were purged until stabilization criteria had been met in accordance with the procedures in the current operating permit. Once groundwater parameters were stabilized, the monitoring wells were sampled. No filtration of samples was conducted in the field or during laboratory procedures. Monitoring well sampling forms for each of the groundwater monitoring

events are included in **Appendix A**. Groundwater samples collected during the 2024 sampling events were submitted to Pace Analytical Services, LLC in Madisonville, Kentucky for laboratory analysis for Appendix III and Appendix IV parameters, in accordance with 40 CFR §257.95(b). Laboratory analyses were performed in accordance with USEPA-approved methods. Groundwater results for compliance and characterization monitoring wells are presented in **Section 4.0** of this Report.



4.0 Data Evaluation

4.1 Groundwater Flow

The measured depth to groundwater level data and the calculated groundwater elevations during the 2024 monitoring events are summarized in **Table 2**. The calculated groundwater elevations during March and September/October 2024 were used to construct a piezometric surface map to illustrate groundwater flow conditions for the uppermost aquifer on **Figures 3 and 4**, respectively. These data are representative of general conditions at the Unit. Overall, groundwater flow beneath the footprint of the Wilson Phase II Landfill was to the south during the 2024 monitoring events. Historically, the predominant groundwater flow direction observed at the Unit has been the south-southeast. Groundwater flow beneath the Wilson Phase II Landfill is influenced by extensive historical coal strip-mining and the physical extent of mine spoil deposits. These mine spoil deposits are laterally limited by the remaining bedrock high walls left undisturbed south of the Unit along the north side of State Route 85 and beyond (west of) the western edge of the Wilson Phase II Landfill. Outside the footprint of the Unit, the groundwater flow beneath the Site includes a western component along the southeastern portion of the Site, a localized southern component in the vicinity of bedrock Monitoring Wells MW-104 and MW-110 and localized northern components in the vicinity of bedrock Monitoring Wells MW-105R and MW-113.

4.2 Estimated Vertical Hydraulic Gradient

Reviewing comparisons of hydrologic data at paired/nested wells allows an evaluation of estimated vertical hydraulic gradients. The nested well clusters at the Site include two well pairs, Monitoring Wells MW-4/4D and MW-10/10D.

The estimated vertical hydraulic gradient is calculated by the following equation:

$$\frac{\text{Water Elevation (shallow well)} - \text{Water Elevation (deep well)}}{\text{Screen Midpoint Elevation of Screen (shallow well)} - \text{Screen Midpoint Elevation of Screen (deep well)}}$$

* A positive gradient identifies a downward gradient, while a negative gradient identifies an upward gradient.

The estimated vertical gradients from -0.00315 upward (MW-4/4D; September 2024) to no vertical gradient (MW-10/10D; March 2024). The estimated vertical hydraulic gradients are summarized in **Table 3**.

4.3 Sampling Results

Two assessment monitoring and characterization sampling events were completed in April and September/October 2024. Results from these sampling events are summarized in the tables included in **Appendix B**. Copies of analytical laboratory reports are included in **Appendix C**. Laboratory data was validated and all data are considered viable for reporting as qualified. Copies of data validation reports are provided in **Appendix D**.

4.4 Statistical Evaluation

As part of previous assessment monitoring performed at the Unit, background and downgradient monitoring wells for the Wilson Phase II Landfill were sampled for Appendix IV constituents from 2018



through 2023. In accordance with 40 CFR §257.95, GWPSs were established for detected Appendix IV constituents. The previous 2023 assessment monitoring results indicate the presence of Appendix IV constituents at SSLs above their respective GWPSs in the following monitoring wells:

- Cobalt: MW-10

In accordance with 40 CFR §257.93(f), 40 CFR §257.93(h), and 40 CFR §257.95(d)(2), statistical evaluation of the 2024 assessment groundwater data collected to date was conducted as part of developing this statistical evaluation. The evaluation was conducted to identify any 2024 SSIs over background concentrations for the Appendix III and Appendix IV parameters and any 2024 SSLs over established GWPSs for detected Appendix IV parameters. A summary of the 2024 statistical evaluation conducted on Appendix III and Appendix IV parameters is provided as **Appendix E**.

Statistical methods were chosen in accordance with 40 CFR §257.93(f) and the rationale behind why each method was selected is outlined in the *Update to Certification of Statistical Method for Evaluation Groundwater* (Burns & McDonnell, 2022b). Groundwater quality data for Appendix III parameters were evaluated using an inter-well statistical evaluation approach that statistically compared constituent concentrations at downgradient monitoring wells to those present at a background monitoring well. For the Unit, Monitoring Well MW-8 is designated as the background well because it is located hydraulically upgradient of the Unit, whereas Monitoring Wells MW-5, MW-6, MW-7, and MW-10 are designated as downgradient compliance monitoring wells because they are located hydraulically downgradient of the Unit and near the CCR waste boundary.

As presented in **Appendix E**, the following Appendix III constituents were observed as SSIs with concentrations above calculated background values in downgradient compliance monitoring wells.

2024 SSIs for Appendix II Detection Monitoring Parameters	
April 2024 Sampling Event	September/October 2024 Sampling Event
Boron (MW-5, MW-6, MW-7, and MW-10)	Boron (MW-5, MW-6, MW-7, and MW-10)
Calcium (MW-5, MW-6, MW-7, and MW-10)	Calcium (MW-5, MW-6, and MW-10)
Chloride (MW-5, MW-6, MW-7, and MW-10)	Chloride (MW-5, MW-6, MW-7, and MW-10)
Sulfate (MW-5, MW-6, and MW-7)	Sulfate (none)
Total Dissolved Solids (TDS) (MW-5, MW-6, and MW-10)	TDS (MW-5, MW-6, MW-7, and MW-10)

The previously identified Appendix III constituent SSIs for pH (field) at MW-6 and MW-10 (noted for the first time in 2021) were not verified in 2022, 2023, and 2024. Fluoride did not have an SSI over background (consistent with historical data). Based on the Appendix III constituent SSIs, assessment monitoring is required to continue at the Unit on a semi-annual basis.

As presented in **Appendix E**, the following Appendix IV constituents were observed as SSIs with concentrations above calculated background values in downgradient compliance monitoring wells.



2024 SSIs for Appendix IV Assessment Monitoring Parameters	
April 2024 Sampling Event	September/October 2024 Sampling Event
Cobalt (MW-10)	Cobalt (MW-10)
Lithium (MW-5, MW-6, and MW-7)	Lithium (MW-5, MW-6, and MW-7)
Mercury (none)	Mercury (MW-10)

Mercury (MW-10) has not historically been an SSI and has not been detected until the September/October 2024 sampling event. The September/October 2024 mercury detection resulting in an initial SSI is further discussed in the data review (see **Appendix D**) and the statistical evaluation memorandum see (**Appendix E**).

The Appendix IV constituents with SSIs were further evaluated to determine whether they are present at SSLs over the GWPSs by calculating the lower confidence limit (LCL) at 95 percent confidence for each monitoring well and constituent using all the baseline, detection, and assessment monitoring results collected to date. For a constituent to be present at an SSL over the GWPS, its LCL must be greater than the GWPS. As presented in **Appendix E**, the following Appendix IV constituents were observed at SSLs over the GWPSs.

2024 SSLs Above GWPSs for Appendix IV Assessment Monitoring Parameters	
April 2024 Sampling Event	September/October 2024 Sampling Event
Cobalt (MW-10)	Cobalt (MW-10)

The LCLs for the remaining monitoring wells and Appendix IV constituents are less than the GWPSs and thus are not considered SSLs. Lithium (MW-6) was reported as an SSL in both 2023 sampling events; however, it was not present as an SSL during the two 2024 sampling events (the LCL was equal to the GWPS).

4.5 Conclusion

Based upon the statistical evaluation of Appendix III and Appendix IV parameters collected during assessment monitoring at the Wilson Phase II Landfill, BREC will continue assessment monitoring in 2025.



5.0 Certifications and Notifications to the Facility Operating Record

The following certifications and notifications were made to the operating record and/or were posted to BREC's publicly accessible CCR website during the 2024 reporting period:

- *2023 Annual Groundwater Monitoring and Corrective Action Report* (Burns & McDonnell, 2024a);
- Re: "Statistical Evaluation of April 2024 Assessment Monitoring Groundwater Data" (Burns & McDonnell, 2024b; **Appendix E**);
- Re: "*1st Half 2024 Remedy Selection Progress Report*" (Burns & McDonnell, 2024c);
- Re: "Statistical Evaluation of September and October 2024 Assessment Monitoring Groundwater Data" (Burns & McDonnell, 2024d; **Appendix E**); and
- Re: "*2nd Half 2024 Remedy Selection Progress Report*" (Burns & McDonnell, 2024e).



6.0 Key Activities Planned for 2025

Anticipated activities for the next 2025 annual reporting period include groundwater monitoring and progress towards selection of a remedy for the Unit.

6.1 Groundwater Monitoring

Continued semi-annual assessment monitoring of all CCR Rule program compliance and characterization monitoring wells for the Unit is planned for 2025.

6.2 Remedy Selection

As required by 40 CFR §257.97, BREC is in the process of selecting a remedy for groundwater impacts at the Unit. Currently BREC considers four (4) potential corrective action alternatives reported in the ACM as viable options to address groundwater impacts at the Unit include:

- Alternative #2a: Closure in Place (CiP), Institutional Controls (ICs), Other Source Control, and Groundwater Monitoring;
- Alternative #3: CiP, ICs, Hydraulic Containment, Other Source Control (consisting of seepage collection and treatment), Ex-Situ Treatment, and Groundwater Monitoring;
- Alternative #4: CiP, ICs, Other Source Control, Physical Containment, Permeable Reactive Barrier, and Groundwater Monitoring; and
- Alternative #5: CiP, ICs, Other Source Control, In-Situ Treatment, and Groundwater Monitoring.

To evaluate each corrective action alternative, additional data collection is required. BREC is currently evaluating data collection needs in the following areas to assist with remedy selection:

1. Nature and extent of impact – groundwater trends, influence of non-groundwater remedies, etc.;
2. Physical characteristics – available data on the physical characteristics of the Wilson Phase II Landfill and the groundwater environment;
3. Performance modeling – data needed to develop digital models demonstrating the effectiveness of potential alternatives; and
4. Engineering – feasibility, cost estimates, etc.

BREC is working to establish a comprehensive list of data collection needs to proceed forward with remedy evaluation and anticipates providing additional data in future semi-annual remedy selection progress reports.

Additionally, feedback from the KDWM of the *Groundwater Assessment Report* (Burns & McDonnell, 2023b) addressing the KDWM requirements at the Wilson Phase II Landfill under a separate state regulatory program (401 KAR 45:160), will also be used to support filling data gaps and progressing towards selection of a remedy for the Unit. The data generated from the ongoing groundwater assessment under 401 KAR 45:160 (Phase I Special Waste Landfill) and 40 CFR §257.95 (Wilson Phase



II Landfill) are critical to the development of a comprehensive conceptual site model for groundwater, which is needed to evaluate the appropriate remedy for the Wilson Phase II Landfill groundwater impacts.

The 2025 groundwater monitoring program will continue to assist in evaluating the success of the non-groundwater release remedies currently implemented at the Unit/Site and will further provide relevant and important information to be considered in supporting the evaluation of the final groundwater remedy selection.



7.0 References

- AECOM, 2018. *2016-2017 Annual Groundwater Monitoring and Corrective Action Report, Coal Combustion Residuals (CCR) Rule, D.B. Wilson CCR Landfill, Ohio County, Kentucky*. January.
- AECOM, 2019a. *2018 Annual Groundwater Monitoring and Corrective Action Report, CCR Rule, D.B. Wilson CCR Landfill, Ohio County, Kentucky*. January.
- AECOM, 2019b. *Assessment of Corrective Measures under the CCR Rule; Phase II Landfill, D.B. Wilson Generating Station, Ohio County, Kentucky*. June.
- AECOM, 2019c. *Monitoring Well Construction Progress Report, Addendum CCR Monitoring Program, Phase II Landfill, D.B. Wilson Generating Station, Ohio County, Kentucky*. December 13.
- AECOM, 2020. *2019 Annual Groundwater Monitoring and Corrective Action Report, CCR Rule, D.B. Wilson Generating Station Phase II CCR Landfill, Ohio County, Kentucky*. January.
- AECOM, 2021. *2020 Annual Groundwater Monitoring and Corrective Action Report, CCR Rule, Wilson Phase II Landfill, D.B. Wilson Generating Station, Ohio County, Kentucky*. January.
- AECOM, 2022. *2021 Annual Groundwater Monitoring and Corrective Action Report, CCR Rule, Wilson Phase II Landfill, D.B. Wilson Generating Station, Ohio County, Kentucky*. January.
- Associated Engineers, Inc., 2009. *Monitoring Well Completion Report, D.B. Wilson Special Waste Landfill, Solid Waste Permit Number 092-00004, Ohio County, Kentucky*. April 13.
- Big Rivers Electric Corporation, CCR Rule Publicly Accessible Internet Site, CCR Rule Compliance Data Information, D.B. Wilson Station, <https://www.bigrivers.com/ccr-rule-compliance-wilson-station.html>.
- Burns & McDonnell, 2021. *Groundwater Assessment Plan, D.B. Wilson Station, Wilson Special Waste Landfill, Ohio County, Kentucky*. May.
- Burns & McDonnell, 2022a. *Monitoring Well Construction Progress Report*. February 25.
- Burns & McDonnell, 2022b. *Update to Certification of Statistical Method for Evaluating Groundwater in accordance with 40 CFR §257.93, D.B. Wilson Station Phase II CCR Landfill, in Centertown, Kentucky*. May 25.
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TABLES

Table 1 Summary of Monitoring Well System Construction Details Phase II CCR Landfill Big Rivers Electric Corporation - Wilson Station Ohio County, Kentucky													
Well No.		Location*		Reference Elevation*		Casing Length (feet, TOIC)	Size / Type (ID / Material)	Filter Pack Interval (feet, NAVD88)		Screened Interval (feet, NAVD88)		Bottom of Boring (feet, GS)	Screened Formation
		Lat	Long	TOIC (feet, NAD27)	GS (feet, NAD27)			Top	Bottom	Top	Bottom		
Phase II CCR Landfill Permitted Monitoring Wells													
MW-5 (8005-3477)	D	37.4638	-87.0910	469.14	467.42	75.0	2 inch / PVC	404.92	391.42	402.92	392.92	76	Mine Spoils
MW-6 (8005-3476)	D	37.4614	-87.0910	433.06	431.12	53.5	2 inch / PVC	390.42	377.12	388.12	378.12	54	Mine Spoils
MW-7 (8005-3479)	D	37.4584	-87.0913	426.14	424.08	50.0	2 inch / PVC	386.58	373.18	384.58	374.58	50.9	Mine Spoils
MW-8 (8005-3475)	U / B	37.4682	-87.0883	471.60	470.01	63.5	2 inch / PVC	419.53	405.96	417.05	407.05	64.05	Mine Spoils
MW-10 (8005-3478)	D	37.4544	-87.0902	398.91	396.91	22.4	2 inch / PVC	387.16	373.83	384.99	374.99	23.08	Mine Spoils
Characterization Wells (Screening Use Only)													
MW-4D (8007-4811)	D / C	37.4542	-87.0851	410.02	407.03	96.4	2 inch / PVC	326.03	313.03	324.03	314.03	111	Mine Spoils
MW-102 (8007-2995)	D / C	37.4613	-87.0757	399.71	396.46	39.3	2 inch / PVC	372.46	360.46	370.46	360.46	36	Unconsolidated
MW-104 (8007-2994)	D / C	37.4517	-87.0826	392.87	389.76	43.4	2 inch / PVC	361.76	349.26	359.76	349.76	40	Sandstone
MW-105 (8007-2992)**	D / C	37.4516	-87.0973	396.74	393.56	63.3	2 inch / PVC	366.56	333.56	343.56	333.56	60	Sandstone
MW-105R (8007-1175)	U / C	37.4516	-87.0972	397.13	394.11	38.7	2 inch / PVC	371.11	357.94	368.67	358.67	35.33	Sandstone
MW-110 (8007-2996)	D / C	37.4521	-87.0907	393.54	390.56	42.8	2 inch / PVC	362.56	350.56	360.56	350.56	76 / 40	Sandstone
MW-111 (8007-8615)	D / C	37.4593	-87.0982	466.06	463.58	98.5	2 inch / PVC	379.81	367.08	377.81	367.81	105	Mine Spoils
MW-112 (8007-8614)	D / C	37.4559	-87.0990	403.82	401.15	54.7	2 inch / PVC	361.38	348.65	359.38	349.38	56	Mine Spoils
MW-113 (8007-1174)	U / C	37.4514	-87.0862	411.61	408.66	58.0	2 inch / PVC	365.89	349.99	363.89	353.89	94	Sandstone
MW-114 (8007-8613)	U / C	37.4510	-87.0760	404.18	401.46	50.7	2 inch / PVC	365.69	351.46	363.69	353.69	56	Sandstone
MW-10D (8007-8616)	D / C	37.4548	-87.0899	399.00	396.27	77.7	2 inch / PVC	333.50	320.77	331.50	321.50	77	Mine Spoils
Phase I Speical Waste Landfill Monitoring Wells (Water Levels Only)													
MW-1 (8002-9621)	U	37.4667	-87.0852	443.89	442.31	36.3	4 inch / PVC	419.6	407.6	417.6	407.6	36	Mine Spoils
MW-2 (8002-9622)	D	37.4618	-87.0820	417.11	414.60	36.0	4 inch / PVC	393.3	381.1	391.1	381.1	36	Mine Spoils
MW-3 (8002-9623)	D	37.4576	-87.0845	411.12	408.19	36.2	4 inch / PVC	387.2	374.9	384.9	374.9	36	Mine Spoils
MW-4 (8002-9624)	D	37.4546	-87.0850	408.82	406.55	31.3	4 inch / PVC	389.6	377.5	387.5	377.5	31	Mine Spoils
Water Levels Only													
P-9 (8005-3480)	water level only	37.4622	-87.0867	432.37	429.19	38.7	2 inch / PVC	402.99	389.99	400.99	390.99	39.2	CCR
P-11 (8005-3472)	water level only	37.4593	-87.0872	446.55	444.03	68.6	2 inch / PVC	388.43	374.90	385.93	375.93	69.13	CCR

Notes:
*Reference elevation of monitoring wells surveyed by Associated Engineers, Inc., Madisonville, Kentucky June 2015, November 2018, and January 2022.
*Survey coordinates were based on the Kentucky State Plane, Kentucky Southern Zone, NAD27 datum.
** Monitoring Well MW-105 abandoned and replaced by Monitoring Well MW-105R

C = characterization
CCR = coal combustion residuals
D = downgradient
GS = ground surface, or measured from (below) GS
ID = internal diameter
Lat. / Long. = latitude and longitude
NAD27 = North American Datum of 1927 in feet
NAVD88 = North American Datum of 1988 in feet above mean sea level (amsl)
PVC = polyvinyl chloride
TOIC = top of internal casing, or measured from (below) TOIC
U / B = upgradient / background

Table 2
Monitoring Well Network Groundwater Elevations
Phase II CCR Landfill
 Big Rivers Electric Corporatoin - Wilson Station
 Ohio County, Kentucky

WILSON PHASE II CCR LANDFILL										
Reference Elevation TOIC*(ft, NAVD88)	OPERATING PERMIT GROUNDWATER COMPLIANCE MONITORING WELLS									
	MW-5		MW-6		MW-7		MW-8		MW-10	
	Downgradient 469.14		Downgradient 433.06		Downgradient 426.14		Upgradient/Background 471.60		Downgradient 398.91	
Date Measured	Depth to Water (feet)	GW Elevation (feet)	Depth to Water (feet)	GW Elevation (feet)	Depth to Water (feet)	GW Elevation (feet)	Depth to Water (feet)	GW Elevation (feet)	Depth to Water (feet)	GW Elevation (feet)
3/29/2024	57.54	411.60	42.58	390.48	40.80	385.34	45.44	426.16	13.91	385.00
9/27/2024	56.07	413.07	41.83	391.23	40.29	385.85	44.31	427.29	13.70	385.21

Reference Elevation TOIC*(ft, NAVD88)	CHARACTERIZATION GROUNDWATER MONITORING WELLS									
	MW-10D		MW-4D		MW-102		MW-104		MW-105R	
	Characterization 399.00		Characterization 410.02		Characterization 399.71		Characterization 392.87		Characterization 397.13	
Date Measured	Depth to Water (feet)	GW Elevation (feet)	Depth to Water (feet)	GW Elevation (feet)	Depth to Water (feet)	GW Elevation (feet)	Depth to Water (feet)	GW Elevation (feet)	Depth to Water (feet)	GW Elevation (feet)
3/29/2024	14.00	385.00	24.88	385.14	11.66	388.05	7.03	385.84	8.58	388.55
9/27/2024	13.70	385.30	24.25	385.77	11.60	388.11	7.13	385.74	8.15	388.98

Reference Elevation TOIC*(ft, NAVD88)	CHARACTERIZATION GROUNDWATER MONITORING WELLS									
	MW-110		MW-111		MW-112		MW-113		MW-114	
	Characterization 393.54		Characterization 466.06		Characterization 403.82		Characterization 411.61		Characterization 404.18	
Date Measured	Depth to Water (feet)	GW Elevation (feet)	Depth to Water (feet)	GW Elevation (feet)	Depth to Water (feet)	GW Elevation (feet)	Depth to Water (feet)	GW Elevation (feet)	Depth to Water (feet)	GW Elevation (feet)
3/29/2024	9.46	384.08	80.05	386.01	18.89	384.93	22.15	389.46	13.00	391.18
9/27/2024	9.60	383.94	81.06	385.00	18.77	385.05	21.48	390.13	13.86	390.32

Table 2 (continued)
Monitoring Well Network Groundwater Elevations
Phase II CCR Landfill
Big Rivers Electric Corporation - Wilson Station
Ohio County, Kentucky

Reference Elevation TOIC*(ft, NAVD88)	SUPPLEMENTAL WATER LEVEL ONLY MONITORING POINTS								PEIZOMETERS			
	MW-1		MW-2		MW-3		MW-4		North (P-9)		South (P-11)	
	Water Level Only 443.89		Water Level Only 417.11		Water Level Only 411.12		Water Level Only 408.82		Water Level Only 432.37		Water Level Only 446.55	
Date Measured	Depth to Water (feet)	GW Elevation (feet)	Depth to Water (feet)	GW Elevation (feet)	Depth to Water (feet)	GW Elevation (feet)	Depth to Water (feet)	GW Elevation (feet)	Depth to Water (feet)	GW Elevation (feet)	Depth to Water (feet)	GW Elevation (feet)
3/29/2024	18.95	424.94	18.49	398.62	25.66	385.46	23.85	384.97	23.47	408.90	61.43	385.12
9/27/2024	19.06	424.83	18.13	398.98	24.82	386.30	23.25	385.57	22.50	409.87	60.41	386.14

1. Reference elevation of Monitoring Wells MW-1 through MW-8, MW-10, MW-10D, MW-4D, MW-102, MW-104, MW-110, and Piezometers P-9 and P-11 surveyed by Associated Engineers, Inc., Madisonville, Kentucky June 2015.
2. Reference elevation of Monitoring Wells MW-10D, 105R, and MW-111 through MW-114 surveyed by Associated Engineers, Inc., Madisonville, Kentucky January 12, 2022.
3. Survey coordinates were based on the Kentucky State Plane, Kentucky Southern Zone, NAD27 datum.

ft = feet
GS = ground surface
GW = groundwater
NAVD88 = North American Datum of 1988 in feet above mean sea level (amsl).
TOIC = top of internal casing, or measured from (below) TOIC

Table 3
Estimated Vertical Hydraulic Gradients
Wilson Phase II CCR Landfill
Big Rivers Electric Corporation - Wilson Station
Ohio County, Kentucky

Well Cluster	Top of Casing Elev. (ft, NAVD88)	Total Well Depth (ft, TOIC)	Well Screen Elevation			Screened Geologic Formation	DTW (ft, TOIC)	Water Elevation (ft, NAVD88)	Water Elevation Difference (ft)	Vertical Gradient (feet/foot)	
			Top (ft, NAVD88)	Midpoint (ft, NAVD88)	Bottom (ft, NAVD88)						
29-Mar-24											
MW-4	408.82	31.30	387.50	382.50	377.50	Mine spoils	23.85	384.97	0.17	-0.00268	Upward
MW-4D	410.02	96.40	324.03	319.03	314.03	Mine spoils	24.88	385.14			
MW-10	398.91	22.4	384.99	379.99	374.99	Mine spoils	13.91	385.00	0.00	0.00000	Downward
MW-10D	399.00	76.95	331.50	326.50	321.50	Mine spoils	14.00	385.00			
27-Sep-24											
MW-4	408.82	31.30	387.50	382.50	377.50	Mine spoils	23.25	385.57	0.20	-0.00315	Upward
MW-4D	410.02	96.40	324.03	319.03	314.03	Mine spoils	24.25	385.77			
MW-10	398.91	22.4	384.99	379.99	374.99	Mine spoils	13.70	385.21	0.09	-0.00168	Upward
MW-10D	399.00	76.95	331.50	326.50	321.50	Mine spoils	13.70	385.30			

$$\text{Vertical Gradient (ft/ft)} = \frac{\text{Groundwater Elevation of (Shallow Well)} - \text{Groundwater Elevation of (Deep Well)}}{(\text{Screen Midpoint Elevation (Shallow Well)} - \text{Screen Midpoint Elevation (Deep Well)})}$$

DTW = depth to water

ft - feet

NAVD88= North American Datum of 1988 in feet above mean sea level (amsl)

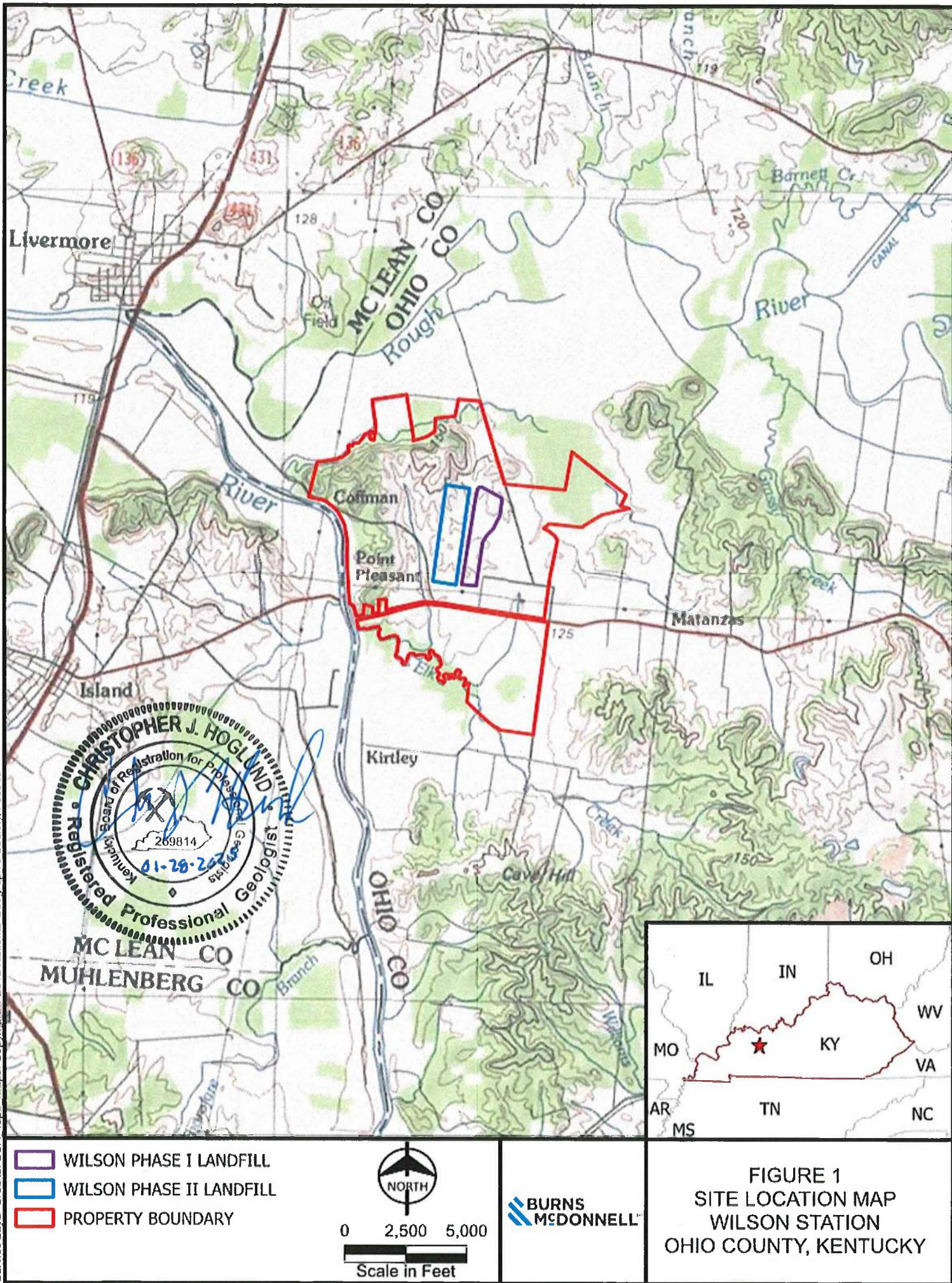
TOIC = Top of internal casing, or measured from (below) TOIC

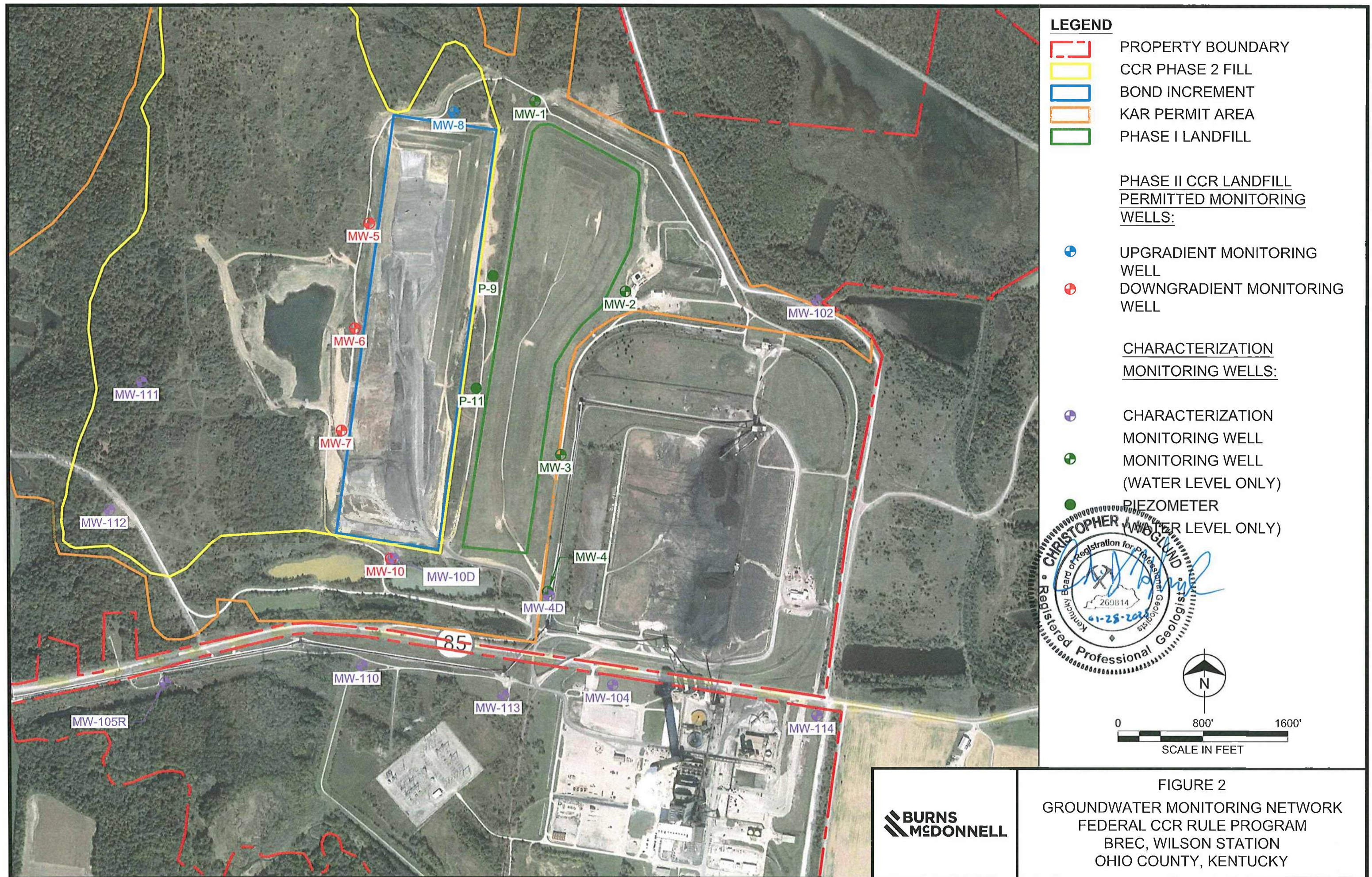
Notes:

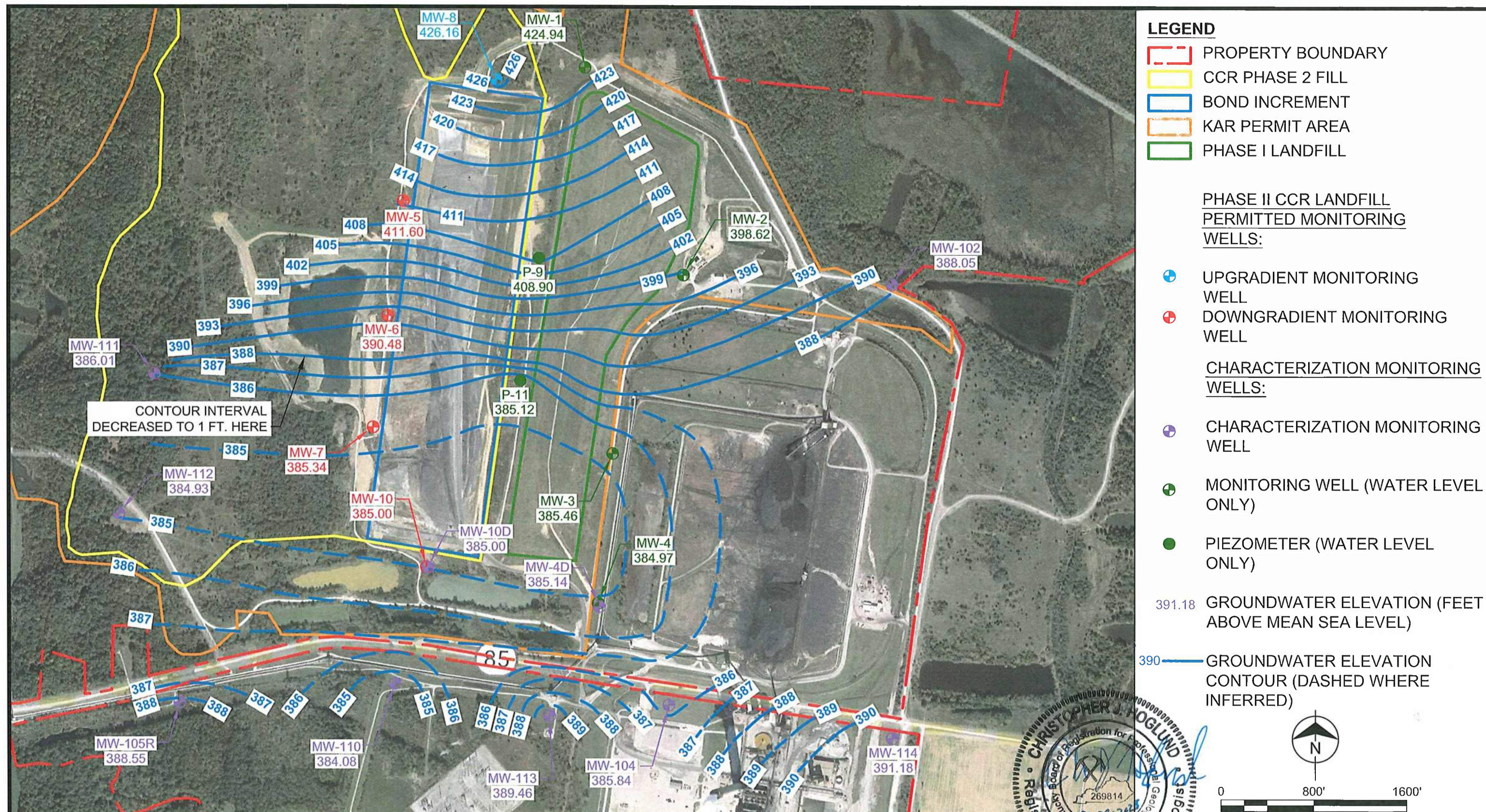
1. Positive vertical gradient value identifies a downward gradient, while a negative value identifies an upward gradient.

FIGURES



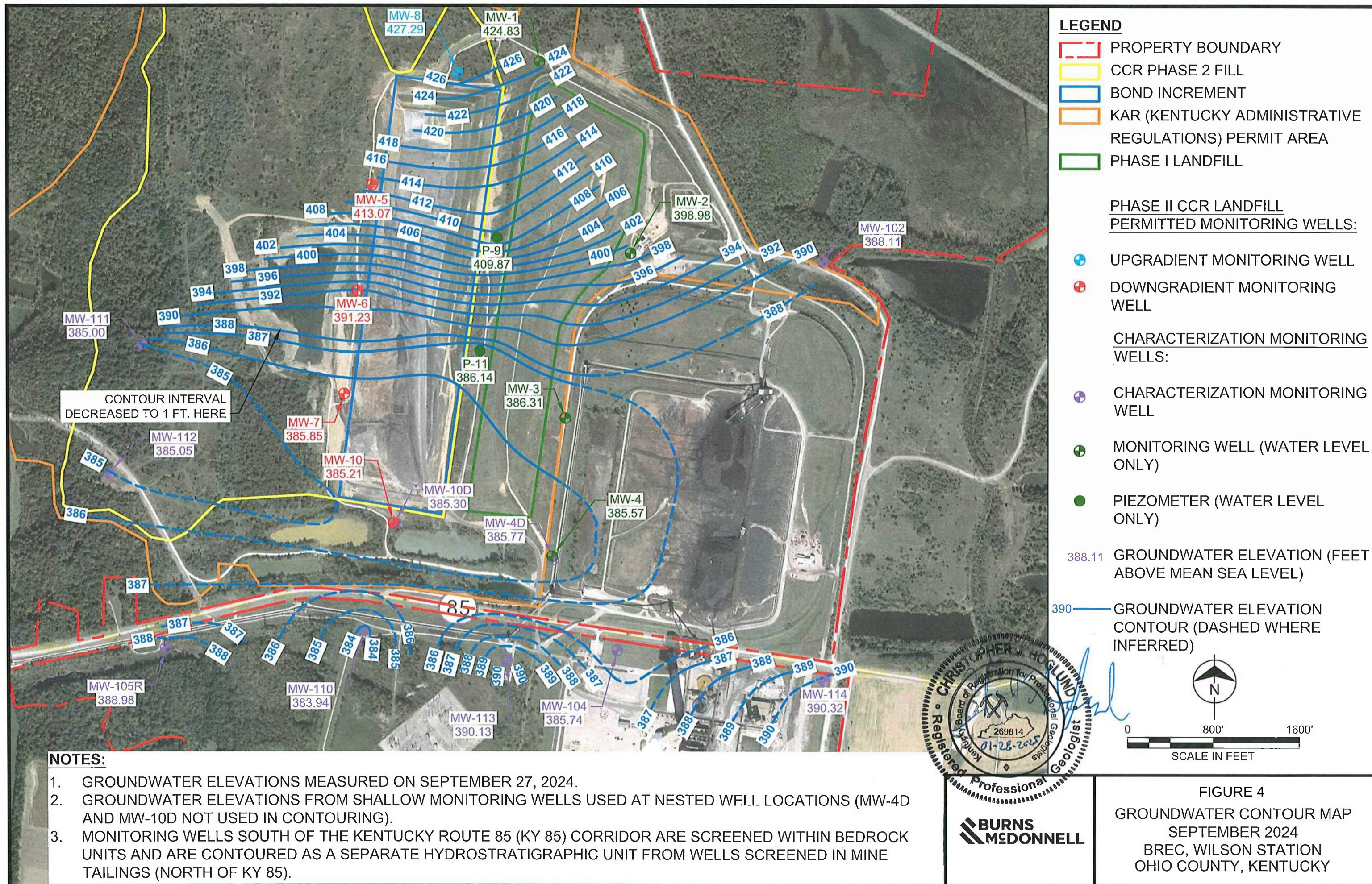






**BURNS
MCDONNELL**

FIGURE 3
GROUNDWATER CONTOUR MAP
MARCH 2024
BREC, WILSON STATION
OHIO COUNTY, KENTUCKY



APPENDIX A - FIELD SAMPLING FORMS

CCR GROUNDWATER FIELD LOG

WILSON LANDFILL

Site Name:	Well No.	Total Depth (ft.)	Initial Depth to Water (ft.)	Height of Water Column (ft.)	Date:	Time:				
Wilson LF	MW-4D	93.5	24.40	69.10	4/17/24	0945				
Site Location:	AKGWA#	Casing Diameter ☐ 4" ☒ 2"	Measuring Point (ft.)	Groundwater Elevation (ft.)	Well Vol. (Gal.)	PO #				
Ohio Co, KY	8007-4811	Conversion fact. 4"-0.67 2"-0.16	410.02	385.62	11.06					
☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☐ Fog ☐ Clear ☒ Partly Cloudy ☒ Windy Temp. 71 (F°)										
Time	ET (min)	Depth to Water (ft.)	Purge Rate ml/min	Volume Purged (L)	Temp (°C)	Sp. Cond. (mS)	DO Mg/L	pH (SU)	eH/ORP (mV)	Turbidity (NTU)
0905	0	24.40	200	0	18.00	5.22	2.50	6.30	7	30.5
0910	5	24.40	200	1.0	18.07	5.59	0.56	6.23	-11	21.8
0915	10	24.40	200	2.0	18.18	5.61	0.44	6.28	-16	18.5
0920	15	24.40	200	3.0	18.09	5.63	0.29	6.27	-17	17.9
0925	20	24.40	200	4.0	18.26	5.44	0.22	6.22	-38	18.6
0930	25	24.40	200	5.0	18.34	5.05	0.24	6.16	-44	17.8
0935	30	24.40	200	6.0	18.20	4.93	0.49	6.14	-44	14.3
0940	35	24.40	200	7.0	18.36	4.88	0.26	6.09	-42	13.6
0945	40	24.40	200	8.0	18.24	4.88	0.25	6.11	-43	12.2
For three (3) consecutive Readings			Required Purge	Actual Purge	+/- 3% (°C)	+/- 3%	+/- 10% <0.5mg/l stable	+/- .10 (SU)	+/- 10 mV	+/- 10% unless <5 NTU consider stable
Well Condition	Pad Condition	Lock Functioning	Bladder Pump	Casing SS ☐ Casing PVC ☒	Field Blank Collected Time: 10:30		Duplicated Collected Time:			
good	good	☒ Yes ☐ No	☒ Yes ☐ No	Filtered: ☐ Yes ☒ No	Split Sample ☐ Yes ☒ No		Semi-Annual ☒			
Sample Time	Depth to Water	Color	Odor	Temp. (°C)	Sp. Cond. (mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity (NTU)	
0945	24.40	Clear	none	18.24	4.88	0.25	6.11	-43	12.2	

pH 3.98
mS/cm 4.62
NTU 0.3
mg/L DO 9.42

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②

Groundwater Field Log

Wilson Landfill

Site Name: Wilson LF	Well No. MW-5	Total Depth (ft.) 75.0	Initial Depth to Water (ft.) 57.73	Height of Water Column (ft.) 17.27	Date: 4.17.2024	Time: 07:30
Site Location: Ohio Co, KY	AKGWA# 8005-3477	Casing Diameter □ 4" ■ 2" Conversion fact. 4"-0.67 2"-0.16	Measuring Point (ft.) 469.14	Groundwater Elevation (ft.) 411.41	Well Vol. (Gal.) 2.76	PO #

☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☐ Fog ☐ Clear ☒ Partly Cloudy ☐ Windy Temp. **68°** (F°)

Time	ET (min)	Depth to Water (ft.)	Purge Rate ml/min	Volume Purged (L)	Temp (°C)	Sp. Cond. (mS)	DO Mg/L	pH (SU)	eH/ORP (mV)	Turbidity (NTU)
06:55	0	57.81	100ml	0	19.32	4.18	1.97	6.35	4	566
07:00	5	57.81	100ml	.5	18.49	4.28	1.09	6.32	-4	559
07:05	10	57.81	100ml	1	18.32	4.32	0.67	6.30	-8	548
07:10	15	57.81	100ml	1.5	18.29	4.33	0.50	6.30	-10	544
07:15	20	57.81	100ml	2	18.16	4.36	0.42	6.29	-13	537
07:20	25	57.81	100ml	2.5	18.19	4.36	0.36	6.29	-15	524
07:25	30	57.82	100ml	3	18.26	4.36	0.40	6.30	-15	514
07:30	35	57.82	100ml	3.5	18.16	4.37	0.33	6.30	-15	510

For three (3) consecutive Readings	Required Purge	Actual Purge	+/- 3% (°C)	+/- 3%	+/- 10% <0.5mg/l stable	+/- .10 (SU)	+/- 10 mV	+/- 10% unless <5 NTU consider stable
------------------------------------	----------------	--------------	-------------	--------	-------------------------	--------------	-----------	---------------------------------------

Well Condition	Pad Condition	Lock Functioning	Bladder Pump	Casing SS ☐ Casing PVC ☒	☐ Field Blank Collected Time:	☐ Duplicated Collected Time:
good	good	■ Yes □ No	■ Yes □ No	Filtered: □ Yes ■ No	Split Sample ☐ Yes ■ No With:	Semi-Annual ■

Sample Time	Depth to Water	Color	Odor	Temp. (C°)	Sp. Cond. (mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity NTU)
07:30	57.82	Clear	none	18.16	4.37	0.33	6.30	-15	510

Groundwater Field Log

Wilson Landfill

Site Name: Wilson LF	Well No. MW-6	Total Depth (ft.) 53.50	Initial Depth to Water (ft.) 42.38	Height of Water Column (ft.) 11.12	Date: 4/16/24	Time: 1350
Site Location: Ohio Co, KY	AKGWA# 8005-3476	Casing Diameter ☐ 4" ☒ 2" Conversion fact. 4"-0.67 2"-0.16	Measuring Point (ft.) 433.06	Groundwater Elevation (ft.) 390.68	Well Vol. (Gal.) 1.78	PO #

☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☐ Fog ☒ Clear ☐ Partly Cloudy ☐ Windy Temp. **85** (F°)

Time	ET (min)	Depth to Water (ft.)	Purge Rate ml/min	Volume Purged (L)	Temp (°C)	Sp. Cond. (mS)	DO Mg/L	pH (SU)	eH/ORP (mV)	Turbidity (NTU)
1330	0	42.38	100	0	18.51	2.62	1.44	6.72	-40	0.1
1335	5	42.38	100	0.5	18.05	2.62	0.73	6.69	-41	0.0
1340	10	42.38	100	1.0	17.90	2.62	0.46	6.68	-42	0.0
1345	15	42.38	100	1.5	17.91	2.62	0.27	6.67	-43	0.0
1350	20	42.38	100	2.0	17.90	2.62	0.15	6.67	-44	0.0
For three (3) consecutive Readings		Required Purge	Actual Purge	+/- 3% (°C)	+/- 3%	+/- 10% <0.5mg/l stable	+/- .10 (SU)	+/- 10 mV	+/- 10% unless <5 NTU consider stable	

Well Condition	Pad Condition	Lock Functioning	Bladder Pump	Casing SS ☐ Casing PVC ☒	☐ Field Blank Collected Time:	☐ Duplicated Collected Time:
good	good	☒ Yes ☐ No	☒ Yes ☐ No	Filtered: ☐ Yes ☒ No	Split Sample ☐ Yes ☒ No With:	Semi-Annual ☒

Sample Time	Depth to Water	Color	Odor	Temp. (°C)	Sp. Cond. (mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity NTU)
1350	42.38	Clear	None	17.90	2.62	0.15	6.67	-44	0.0

Groundwater Field Log

Wilson Landfill

Site Name: Wilson LF	Well No. MW-7	Total Depth (ft.) 50.00	Initial Depth to Water (ft.) 40.30	Height of Water Column (ft.) 9.7	Date: 4/10/24	Time: 1240
Site Location: Ohio Co, KY	AKGWA# 8005-3479	Casing Diameter □ 4" ☒ 2" Conversion fact. 4"-0.67 2"-0.16	Measuring Point (ft.) 426.14	Groundwater Elevation (ft.) 385.84	Well Vol. (Gal.) 1.55	PO #

☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☐ Fog ☒ Clear ☐ Partly Cloudy ☐ Windy Temp. **78** (F°)

Time	ET (min)	Depth to Water (ft.)	Purge Rate ml/min	Volume Purged (L)	Temp (°C)	Sp. Cond. (mS)	DO Mg/L	pH (SU)	eH/ORP (mV)	Turbidity (NTU)
1200	0	40.30	100	0	19.15	1.76	0.34	7.10	-29	88.9
1205	5	40.30	100	0.5	18.24	2.27	1.00	6.83	-44	36.7
1210	10	40.30	100	1.0	18.26	2.25	0.52	6.84	-46	24.2
1215	15	40.30	100	1.5	18.21	2.24	0.29	6.82	-46	12.2
1220	20	40.30	100	2.0	18.26	2.23	0.18	6.82	-47	8.6
1225	25	40.30	100	2.5	18.30	2.22	0.42	6.82	-48	6.9
1230	30	40.30	100	3.0	18.36	2.22	0.11	6.81	-48	5.0
1235	35	40.30	100	3.5	18.40	2.22	0.07	6.80	-48	4.0
1240	40	40.30	100	4.0	18.35	2.22	0.00	6.79	-48	3.9
For three (3) consecutive Readings			Required Purge	Actual Purge	+/- 3% (°C)	+/- 3%	+/- 10% <0.5mg/l stable	+/- .10 (SU)	+/- 10 mV	+/- 10% unless <5 NTU consider stable

Well Condition	Pad Condition	Lock Functioning	Bladder Pump	Casing SS ☐	☐ Field Blank Collected Time:	☐ Duplicated Collected Time:			
good	good	☒ Yes ☐ No	☒ Yes ☐ No	Casing PVC ☒	Filtered: ☐ Yes ☒ No	Semi-Annual ☒			
Sample Time	Depth to Water	Color	Odor	Temp. (°C)	Sp. Cond. (mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity NTU
1240	40.30	clear	none	18.35	2.22	0.00	6.79	-48	3.9

Groundwater Field Log

Wilson Landfill

Site Name: Wilson LF	Well No. MW-8	Total Depth (ft.) 63.46	Initial Depth to Water (ft.) 45.52	Height of Water Column (ft.) 17.94	Date: 4.16.2024	Time: 12:40				
Site Location: Ohio Co, KY	AKGWA# 8005-3475	Casing Diameter ☐ 4" ☒ 2" Conversion fact. 4"-0.67 2"-0.16	Measuring Point (ft.) 471.60	Groundwater Elevation (ft.) 424.08	Well Vol. (Gal.) 2.87	PO #				
☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☐ Fog ☒ Clear ☐ Partly Cloudy ☐ Windy Temp. 75 (F°)										
Time	ET (min)	Depth to Water (ft.)	Purge Rate ml/min	Volume Purged (L)	Temp (°C)	Sp. Cond. (mS)	DO Mg/L	pH (SU)	eH/ORP (mV)	Turbidity (NTU)
11:40	0	45.52	100ml	0	18.40	1.65	0.83	6.32	-77	217
11:45	5	45.52	100ml	.5	18.43	1.59	0.43	6.26	-74	109
11:50	10	45.52	100ml	1	18.46	1.56	0.26	6.26	-71	77.7
11:55	15	45.52	100ml	1.5	18.45	1.56	0.21	6.29	-66	67.8
12:00	20	45.52	100ml	2	18.50	1.55	0.19	6.29	-66	65.0
12:05	25	45.52	100ml	2.5	18.52	1.55	0.16	6.29	-64	56.5
12:10	30	45.52	100ml	3	18.53	1.55	0.21	6.30	-63	52.1
12:15	35	45.52	100ml	3.5	18.52	1.55	0.14	6.30	-61	36.8
12:20	40	45.52	100ml	4	18.53	1.55	0.13	6.30	-59	35.7
12:25	45	45.52	100ml	4.5	18.55	1.55	0.11	6.29	-58	28.1
For three (3) consecutive Readings			Required Purge	Actual Purge	+/- 3% (°C)	+/- 3%	+/- 10% <0.5mg/l stable	+/- .10 (SU)	+/- 10 mV	+/- 10% unless <5 NTU consider stable
Well Condition	Pad Condition	Lock Functioning	Bladder Pump	Casing SS ☐ Casing PVC ☒	☐ Field Blank Collected Time:		☐ Duplicated Collected Time:			
good	good	☒ Yes ☐ No	☒ Yes ☐ No	Filtered: ☐ Yes ☒ No	Split Sample ☐ Yes ☒ No With:		Semi-Annual ☒			
Sample Time	Depth to Water	Color	Odor	Temp. (°C)	Sp. Cond. (mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity NTU	
12:40	45.52	Clear	none	18.62	1.54	0.09	6.30	-55	31.0	

Groundwater Field Log

Wilson Landfill

Site Name: Wilson LF	Well No. MW-8	Total Depth (ft.) 63.46	Initial Depth to Water (ft.) 45.52	Height of Water Column (ft.) 17.94	Date:	Time:				
Site Location: Ohio Co, KY	AKGWA# 8005-3475	Casing Diameter ☐ 4" ☒ 2" Conversion fact. 4"-0.67 2"-0.16	Measuring Point (ft.) 471.60	Groundwater Elevation (ft.) 426.08	Well Vol. (Gal.) 2.87	PO #				
☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☐ Fog ☒ Clear ☐ Partly Cloudy ☐ Windy Temp. 75 (F°)										
Time	ET (min)	Depth to Water (ft.)	Purge Rate ml/min	Volume Purged (L)	Temp (°C)	Sp. Cond. (mS)	DO Mg/L	pH (SU)	eH/ORP (mV)	Turbidity (NTU)
12:30	50	45.52	100ml	5	18.61	1.55	0.10	6.30	-57	42.1
12:35	55	45.52	100ml	5.5	18.70	1.54	0.09	6.29	-57	36.1
12:40	60	45.52	100ml	6	18.62	1.54	0.09	6.30	-55	31.0
For three (3) consecutive Readings		Required Purge	Actual Purge	+/- 3% (°C)	+/- 3%	+/- 10% <0.5mg/l stable	+/- .10 (SU)	+/- 10 mV	+/- 10% unless <5 NTU consider stable	
Well Condition	Pad Condition	Lock Functioning	Bladder Pump	Casing SS ☐ Casing PVC ☒	☐ Field Blank Collected Time:		☐ Duplicated Collected Time:			
good	good	☒ Yes ☐ No	☒ Yes ☐ No	Filtered: ☐ Yes ☒ No	Split Sample ☐ Yes ☒ No With:		Semi-Annual ☒			
Sample Time	Depth to Water	Color	Odor	Temp. (C°)	Sp. Cond. (mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity NTU	
12:40	45.52	Clear	none	18.62	1.54	0.09	6.30	-55	31.0	

Auto cal
 PH - 3.99
 MS - 4.81
 Ntu - 0.1
 DO - 8.88

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Groundwater Field Log

Wilson Landfill

Site Name: Wilson LF	Well No. MW-10	Total Depth (ft.) 22.42	Initial Depth to Water (ft.) 13.61	Height of Water Column (ft.) 8.81	Date: 4/17/24	Time: 0905
Site Location: Ohio Co, KY	AKGWA# 8005-3478	Casing Diameter ☐ 4" ☒ 2" Conversion fact. 4"-0.67 2"-0.16	Measuring Point (ft.) 398.91	Groundwater Elevation (ft.) 385.30	Well Vol. (Gal.) 1.41	PO #

☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☐ Fog ☐ Clear ☒ Partly Cloudy ☒ Windy Temp. **69** (F°)

Time	ET (min)	Depth to Water (ft.)	Purge Rate ml/min	Volume Purged (L)	Temp (°C)	Sp. Cond. (mS)	DO Mg/L	pH (SU)	eH/ORP (mV)	Turbidity (NTU)
0840	0	14.86	100	0	17.72	3.51	0.94	6.00	28	120
0845	5	14.90	100	0.5	18.88	3.47	0.50	5.92	32	94.8
0850	10	14.96	100	1.0	19.34	3.48	0.38	5.91	34	84.0
0855	15	15.00	100	1.5	19.63	3.46	0.34	5.89	36	70.3
0900	20	15.03	100	2.0	19.75	3.47	0.33	5.89	38	68.4
0905	25	15.05	100	2.5	19.85	3.46	0.29	5.89	38	67.8
For three (3) consecutive Readings		Required Purge	Actual Purge	+/- 3% (°C)	+/- 3%	+/- 10% <0.5mg/l stable	+/- .10 (SU)	+/- 10 mV	+/- 10% unless <5 NTU consider stable	

Well Condition	Pad Condition	Lock Functioning	Bladder Pump	Casing SS ☐ Casing PVC ☒	☐ Field Blank Collected Time:	☐ Duplicated Collected Time:
Good	Good	☒ Yes ☐ No	☒ Yes ☐ No	Filtered: ☐ Yes ☒ No	Split Sample ☐ Yes ☒ No With:	Semi-Annual ☒

Sample Time	Depth to Water	Color	Odor	Temp. (C°)	Sp. Cond. (mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity NTU)
0905	15.05	Clear	none	19.85	3.46	0.29	5.89	38	67.8

Groundwater Field Log

Wilson Landfill

Site Name: Wilson LF	Well No. MW-10D	Total Depth (ft.) 76.95	Initial Depth to Water (ft.) 13.78	Height of Water Column (ft.) 63.17	Date: 4/17/24	Time: 0745
Site Location: Ohio Co, KY	AKGWA# 8007-8616	Casing Diameter □ 4" ☒ 2" Conversion fact. 4"-0.67 2"-0.16	Measuring Point (ft.) 399.00	Groundwater Elevation (ft.) 385.22	Well Vol. (Gal.) 10.11	PO #

☐ Rain
 ☐ Sleet/Freezing Rain
 ☐ Snow
 ☐ Fog
 ☐ Clear
 ☒ Partly Cloudy
 ☒ Windy
 Temp. **69** (F°)

Time	ET (min)	Depth to Water (ft.)	Purge Rate ml/min	Volume Purged (L)	Temp (°C)	Sp. Cond. (mS)	DO Mg/L	pH (SU)	eH/ORP (mV)	Turbidity (NTU)
0710	0	13.78	100	0	18.27	3.41	3.34	6.64	128	10.1
0715	5	13.71	100	0.5	18.30	3.42	1.67	6.65	-25	27.0
0720	10	13.73	100	1.0	18.17	3.39	0.93	6.55	-45	11.1
0725	15	13.73	100	1.5	18.29	3.37	0.66	6.53	-49	5.3
0730	20	13.73	100	2.0	18.19	3.37	0.59	6.52	-51	2.9
0735	25	13.73	100	2.5	18.28	3.36	0.52	6.51	-52	2.4
0740	30	13.73	100	3.0	18.35	3.37	0.55	6.50	-53	1.4
0745	35	13.73	100	3.5	18.33	3.37	0.51	6.50	-53	0.9
For three (3) consecutive Readings			Required Purge	Actual Purge	+/- 3% (°C)	+/- 3%	+/- 10% <0.5mg/l stable	+/- .10 (SU)	+/- 10 mV	+/- 10% unless <5 NTU consider stable

Well Condition Good	Pad Condition Good	Lock Functioning ☒ Yes ☐ No	Bladder Pump ☒ Yes ☐ No	Casing SS ☐ Casing PVC ☒	☐ Field Blank Collected Time:	☐ Duplicated Collected Time:
↓	↓			Filtered: ☐ Yes ☒ No	Split Sample ☐ Yes ☒ No	Semi-Annual ☒

Sample Time	Depth to Water	Color	Odor	Temp. (°C)	Sp. Cond. (mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity NTU
0745	13.73			18.33	3.37	0.51	6.50	-53	0.9

CCR GROUNDWATER FIELD LOG

Wilson Landfill

Site Name:	Well No.	Total Depth (ft.)	Initial Depth to Water (ft.)	Height of Water Column (ft.)	Date:	Time:
Wilson LF	MW-102	36.5	11.25	25.25	4/10/24	1050
Site Location:	AKGWA#	Casing Diameter ☐ 4" ☒ 2"	Measuring Point (ft.)	Groundwater Elevation (ft.)	Well Vol. (Gal.)	PO#
Ohio Co, KY	8007-2995	Conversion fact. 4"-0.67 2"-0.16	399.71	388.46	4.04	

☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☐ Fog ☐ Clear ☒ Partly Cloudy ☐ Windy Temp. 72 (F°)

Time	ET (min)	Depth to Water (ft.)	Purge Rate ml/min	Volume Purged (L)	Temp (°C)	Sp. Cond. (mS)	DO Mg/L	pH (SU)	eH/ORP (mV)	Turbidity (NTU)
1000	0	11.25	100	0	16.47	1.07	3.10	7.11	-36	43.9
1005	5	11.25	100	0.5	16.40	1.04	2.25	7.10	-17	25.6
1010	10	11.39	100	1.0	16.38	1.04	1.68	7.03	-30	22.8
1015	15	11.39	100	1.5	16.49	1.04	1.21	7.00	-38	26.9
1020	20	16.75	100	2.0	16.47	1.04	0.88	6.99	-43	27.6
1025	25	17.51	100	2.5	16.54	1.04	0.67	6.97	-47	29.7
1030	30	17.82	100	3.0	16.56	1.04	0.53	6.96	-50	25.4
1035	35	18.21	100	3.5	16.61	1.04	0.41	6.96	-53	30.0
1040	40	18.21	100	4.0	16.59	1.04	0.34	6.92	-54	25.5
1045	45	18.72	100	4.5	16.69	1.04	0.28	6.95	-56	25.3
For three (3) consecutive Readings			Required Purge	Actual Purge	+/- 3% (°C)	+/- 3%	+/- 10% <0.5mg /l stable	+/- .10 (SU)	+/- 10 mV	+/- 10% unless <5 NTU consider stable

Well Condition	Pad Condition	Lock Functioning	Bladder Pump	Casing SS ☐ Casing PVC ☒	☐ Field Blank Collected Time:	☐ Duplicated Collected Time:			
good	good	☒ Yes ☐ No	☒ Yes ☐ No	Filtered: ☐ Yes ☒ No	Split Sample ☐ Yes ☒ No With:	Semi-Annual ☒			
Sample Time	Depth to Water	Color	Odor	Temp. (C°)	Sp. Cond. (mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity NTU

CCR GROUNDWATER FIELD LOG

Wilson Landfill

Site Name:	Well No.	Total Depth (ft.)	Initial Depth to Water (ft.)	Height of Water Column (ft.)	Date:	Time:
Wilson LF	MW-104	40.5	6.90		4/16/24	1435
Site Location:	AKGWA#	Casing Diameter ☐ 4" ☐ 2"	Measuring Point (ft.)	Groundwater Elevation (ft.)	Well Vol. (Gal.)	PO #
Ohio Co, KY	8007-2994	Conversion fact. 4"-0.67 2"-0.16	392.87			

☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☐ Fog ☐ Clear ☒ Partly Cloudy ☒ Windy Temp. 66 (F°)

Time	ET (min)	Depth to Water (ft.)	Purge Rate ml/min	Volume Purged (L)	Temp (°C)	Sp. Cond. (mS)	DO Mg/L	pH (SU)	eH/ORP (mV)	Turbidity (NTU)
1400	0	6.90	200	0	20.12	2.04	0.64	6.97	-17	84.9
1405	5	8.85	200	1	20.17	2.02	0.36	6.94	-26	51.8
1410	10	9.20	100	2	21.12	2.01	0.27	6.93	-28	32.6
1415	15	9.60	100	2.5	21.98	1.99	0.25	6.95	-23	126.0
1420	20	9.80	100	3.0	22.05	1.96	0.38	6.99	-18	23.6
1425	25	10.10	100	3.5	22.19	1.94	0.48	6.99	-16	20.8
1430	30	10.15	100	4.0	22.28	1.93	0.53	6.99	-15	20.0
1435	35	10.20	100	4.5	22.20	1.92	0.50	6.99	-15	20.6
For three (3) consecutive Readings			Required Purge	Actual Purge	+/- 3% (°C)	+/- 3%	+/- 10% <0.5mg /l stable	+/- .10 (SU)	+/- 10 mV	+/- 10% unless <5 NTU consider stable

Well Condition	Pad Condition	Lock Functioning	Bladder Pump	Casing SS ☐ Casing PVC ☒	☐ Field Blank Collected Time:	☐ Duplicated Collected Time:			
Good	Good	☒ Yes ☐ No	☒ Yes ☐ No	Filtered: ☐ Yes ☒ No	Split Sample ☐ Yes ☒ No With:	Semi-Annual ☒			
Sample Time	Depth to Water	Color	Odor	Temp. (C°)	Sp. Cond. (mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity NTU
1435	10.20	Clear	None	22.20	1.92	0.50	6.99	-15	20.6



pH 3.98
ms/cm 5.20
NTU 0.0
mg/L 9.87

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CCR GROUNDWATER FIELD LOG

Wilson Landfill

Site Name:	Well No.	Total Depth (ft.)	Initial Depth to Water (ft.)	Height of Water Column (ft.)	Date:	Time:
Wilson LF	MW-105R	37.87	9.0	28.87	4/16/24	7:40
Site Location:	AKGWA#	Casing Diameter	Measuring Point (ft.)	Groundwater Elevation (ft.)	Well Vol. (Gal.)	PO #
Ohio Co, KY	8007-1175	4" 2" Conversion fact. 4"-0.67 2"-0.16	397.13	388.13	4.62	

☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☐ Fog ☐ Clear ☒ Partly Cloudy ☐ Windy Temp. 64° (F°)

Time	ET (min)	Depth to Water (ft.)	Purge Rate ml/min	Volume Purged (L)	Temp (°C)	Sp. Cond. (mS)	DO Mg/L	pH (SU)	eH/ORP (mV)	Turbidity (NTU)
7:05	0	11.05	200	0	16.66	1.26	1.69	6.92	-61	109
7:10	5	12.92	200	1	16.71	1.25	1.43	6.95	-60	62.0
7:15	10	14.34	200	2	16.44	1.25	1.44	6.95	-59	36.6
7:20	15	15.03	200	3	16.53	1.25	1.42	6.94	-57	31.2
7:25	20	15.98	200	4	16.47	1.25	1.43	6.96	-56	26.9
7:30	25	16.78	200	5	16.48	1.25	1.46	6.95	-53	20.4
7:35	30	17.63	200	6	16.47	1.25	1.46	6.96	-52	20.6
7:40	35	18.41	200	7	16.45	1.25	1.48	6.96	-51	20.5
For three (3) consecutive Readings			Required Purge	Actual Purge	+/- 3% (°C)	+/- 3%	+/- 10% <0.5mg/l stable	+/- .10 (SU)	+/- 10 mV	+/- 10% unless <5 NTU consider stable

Well Condition	Pad Condition	Lock Functioning	Bladder Pump	Casing SS ☐ Casing PVC ☒	☐ Field Blank Collected Time:	☐ Duplicated Collected Time:			
Good	Good	☒ Yes ☐ No	☒ Yes ☐ No	Filtered: ☐ Yes ☒ No	Split Sample ☐ Yes ☒ No With:	Semi-Annual ☒			
Sample Time	Depth to Water	Color	Odor	Temp. (°C)	Sp. Cond. (mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity NTU
7:40	18.41	Clear	none	16.45	1.25	1.48	6.96	-51	20.5



pH 4.0
ms/cm 5.09
NTU 0.1
mg/L 00 9.00

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CCR GROUNDWATER FIELD LOG

Wilson Landfill

Site Name: Wilson LF	Well No. MW-110	Total Depth (ft.) 39.5	Initial Depth to Water (ft.) 9.18	Height of Water Column (ft.) 30.32	Date: 4-16-2024	Time: 07:20
Site Location: Ohio Co, KY	AKGWA# 8007-2996	Casing Diameter ☐ 4" ☒ 2" Conversion fact. 4"-0.67 2"-0.16	Measuring Point (ft.) 393.54	Groundwater Elevation (ft.) 384.36	Well Vol. (Gal.) 4.85	PO #

☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☐ Fog ☐ Clear ☒ Partly Cloudy ☐ Windy Temp. **66** (F°)

Time	ET (min)	Depth to Water (ft.)	Purge Rate ml/min	Volume Purged (L)	Temp (°C)	Sp. Cond. (mS)	DO Mg/L	pH (SU)	eH/ORP (mV)	Turbidity (NTU)
06:40	0	9.22	100ml	0	16.26	.553	1.29	6.37	-45	14.4
06:45	5	9.22	100ml	.5	16.19	.553	0.69	6.37	-39	37.0
06:50	10	9.22	100ml	1	15.99	.553	.53	6.38	-36	233
06:55	15	9.22	100ml	1.5	15.85	.552	.52	6.37	-24	145
07:00	20	9.22	100ml	2	15.82	.550	.52	6.37	-32	79
07:05	25	9.22	100ml	2.5	15.84	.546	.48	6.38	-31	40.7
07:10	30	9.22	100ml	3	15.89	.540	.47	6.38	-28	23.8
07:15	35	9.22	100ml	3.5	15.91	.534	.46	6.38	-28	22.2
07:20	40	9.22	100ml	4	15.86	.527	.45	6.39	-28	23.3
For three (3) consecutive Readings			Required Purge	Actual Purge	+/- 3% (°C)	+/- 3%	+/- 10% <0.5mg /l stable	+/- .10 (SU)	+/- 10 mV	+/- 10% unless <5 NTU consider stable

Well Condition good	Pad Condition good	Lock Functioning ☒ Yes ☐ No	Bladder Pump ☒ Yes ☐ No	Casing SS ☐ Casing PVC ☒	☐ Field Blank Collected Time:	☒ Duplicated Collected Time: 07:42
		Filtered: ☐ Yes ☒ No	Split Sample ☐ Yes ☒ No With:		Semi-Annual ☒	

Sample Time	Depth to Water	Color	Odor	Temp. (C°)	Sp. Cond. (mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity NTU)
07:20	9.22	clear	none	15.86	.527	.45	6.39	-28	23.3



pH 4.0
ms/cm 5.09
NTU 0.1
mg/L DO 9.06

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Groundwater Field Log

Wilson Landfill

Site Name: Wilson LF	Well No. MW-111	Total Depth (ft.) 98.31	Initial Depth to Water (ft.) 80.85	Height of Water Column (ft.) 17.46	Date: 4.16.2024	Time: 9:25
Site Location: Ohio Co, KY	AKGWA# 8007-8615	Casing Diameter ☐ 4" ☒ 2" Conversion fact. 4"-0.67 2"-0.16	Measuring Point (ft.) 466.06	Groundwater Elevation (ft.) 385.21	Well Vol. (Gal.) 2.79	PO #

☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☐ Fog ☐ Clear ☒ Partly Cloudy ☐ Windy Temp. **66** (F°)

Time	ET (min)	Depth to Water (ft.)	Purge Rate ml/min	Volume Purged (L)	Temp (°C)	Sp. Cond. (mS)	DO Mg/L	pH (SU)	eH/ORP (mV)	Turbidity (NTU)
09:00	0	80.85	100ml	0	17.26	3.22	2.85	6.32	5	10.9
09:05	5	80.85	100ml	.5	16.86	3.21	1.29	6.23	5	3.7
09:10	10	80.85	100ml	1	16.80	3.21	0.72	6.21	3	1.3
09:15	15	80.85	100ml	1.5	16.81	3.20	0.45	6.20	2	0.0
09:20	20	80.85	100ml	2	16.71	3.18	.30	6.17	1	0.0
09:25	25	80.85	100ml	2.5	16.74	3.18	0.27	6.17	1	0.0
For three (3) consecutive Readings		Required Purge	Actual Purge	+/- 3% (°C)	+/- 3%	+/- 10% <0.5mg/l stable	+/- .10 (SU)	+/- 10 mV	+/- 10% unless <5 NTU consider stable	

Well Condition	Pad Condition	Lock Functioning	Bladder Pump	Casing SS ☐ Casing PVC ☒	☐ Field Blank Collected Time:	☐ Duplicated Collected Time:
good	good	☒ Yes ☐ No	☒ Yes ☐ No	Filtered: ☐ Yes ☒ No	Split Sample ☐ Yes ☒ No With:	Semi-Annual Collected Time: ☒

Sample Time	Depth to Water	Color	Odor	Temp. (°C)	Sp. Cond. (mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity NTU)
9:25	80.85	clear none	none	16.74	3.18	0.27	6.17	1	0.0



Groundwater Field Log

Auto cal
 pn - 4.03
 ms - 5.49
 ntu - 0.0
 bo - 9.21

201 Third Street
 P.O. Box 24
 Henderson, KY 42419-0024
 270-827-2561
 www.bigrivers.com

Wilson Landfill

Site Name: Wilson LF	Well No. MW-112	Total Depth (ft.) 54.01	Initial Depth to Water (ft.) 18.51	Height of Water Column (ft.) 35.5	Date: 4/11/24	Time: 0915
Site Location: Ohio Co, KY	AKGWA# 8007-8614	Casing Diameter □ 4" ☒ 2" Conversion fact. 4"-0.67 2"-0.16	Measuring Point (ft.) 403.82	Groundwater Elevation (ft.) 385.31	Well Vol. (Gal.) 5.08	PO #

☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☐ Fog ☐ Clear ☒ Partly Cloudy ☐ Windy Temp. **64** (F°)

Time	ET (min)	Depth to Water (ft.)	Purge Rate ml/min	Volume Purged (L)	Temp (°C)	Sp. Cond. (mS)	DO Mg/L	pH (SU)	eH/ORP (mV)	Turbidity (NTU)
0830	0	18.52	150	0	15.41	1.23	2.04	6.85	-24	1.0
0835	5	18.52	150	0.75	15.22	1.21	1.33	6.83	-43	0.0
0840	10	18.52	150	1.50	15.10	1.20	1.12	6.84	-53	0.0
0845	15	18.52	150	2.25	15.02	1.20	0.78	6.82	-54	0.0
0850	20	18.52	150	3.00	15.03	1.19	0.53	6.82	-54	0.0
0855	25	18.52	150	3.75	14.99	1.19	0.44	6.80	-48	0.0
0900	30	18.52	150	4.50	15.05	1.19	1.21	6.88	-49	0.0
0905	35	18.52	150	5.25	14.99	1.19	0.34	6.88	-48	0.0
0910	40	18.52	150	6.00	14.99	1.19	0.26	6.88	-47	0.0
0915	45	18.52	150	6.75	15.02	1.18	0.23	6.88	-44	0.0
For three (3) consecutive Readings			Required Purge	Actual Purge	+/- 3% (°C)	+/- 3%	+/- 10% <0.5mg/l stable	+/- .10 (SU)	+/- 10 mV	+/- 10% unless <5 NTU consider stable

Well Condition	Pad Condition	Lock Functioning	Bladder Pump	Casing SS ☐ Casing PVC ☒	☐ Field Blank Collected Time:	☐ Duplicated Collected Time:
good	good	☒ Yes ☐ No	☒ Yes ☐ No	Filtered: ☐ Yes ☒ No	Split Sample ☐ Yes ☒ No With:	Semi-Annual ☒

Sample Time	Depth to Water	Color	Odor	Temp. (°C)	Sp. Cond. (mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity NTU
0915	18.52	Clear	None	15.02	1.18	0.23	6.88	-44	0.0

Groundwater Field Log

Wilson Landfill

Site Name: Wilson LF	Well No. MW-113	Total Depth (ft.) 57.93	Initial Depth to Water (ft.) 22.18	Height of Water Column (ft.) 35.75	Date: 4/16/24	Time: 0950				
Site Location: Ohio Co, KY	AKGWA# 8007-1174	Casing Diameter ☐ 4" ☒ 2" Conversion fact. 4"-0.67 2"-0.16	Measuring Point (ft.) 411.61	Groundwater Elevation (ft.) 389.43	Well Vol. (Gal.) 5.72	PO #				
☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☐ Fog ☐ Clear ☒ Partly Cloudy ☒ Windy Temp. 64 (F°)										
Time	ET (min)	Depth to Water (ft.)	Purge Rate ml/min	Volume Purged (L)	Temp (°C)	Sp. Cond. (mS)	DO Mg/L	pH (SU)	eH/ORP (mV)	Turbidity (NTU)
0850	0	22.18	200	0	17.58	2.05	0.34	6.68	-67	5.9
0855	5	24.95	200	1	17.68	2.03	0.18	6.66	-70	3.9
0900	10	26.21	200	2	17.69	2.02	0.17	6.66	-72	10.0
0905	15	26.58	200	3	17.64	2.02	0.14	6.66	-73	26.6
0910	20	26.83	200	4	17.65	2.02	0.13	6.66	-75	25.7
0915	25	27.14	200	5	17.69	2.01	0.13	6.65	-75	35.3
0920	30	27.34	200	6	17.69	2.01	0.14	6.64	-75	11.8
0925	35	27.62	200	7	17.82	2.00	0.12	6.66	-76	16.4
0930	40	27.24	200	8	17.87	2.00	0.10	6.66	-76	26.7
0935	45	27.89	200	9	17.89	1.99	0.09	6.67	-77	42.9
For three (3) consecutive Readings			Required Purge	Actual Purge	+/- 3% (°C)	+/- 3%	+/- 10% <0.5mg/l stable	+/- .10 (SU)	+/- 10 mV	+/- 10% unless <5 NTU consider stable
Well Condition	Pad Condition	Lock Functioning	Bladder Pump	Casing SS ☐	☐ Field Blank Collected Time:		☐ Duplicated Collected Time:			
Good	Good	☒ Yes ☐ No	☒ Yes ☐ No	Casing PVC ☒	Filtered: ☐ Yes ☒ No	Split Sample ☐ Yes ☒ No With:		☒ Semi-Annual		
Sample Time	Depth to Water	Color	Odor	Temp. (°C)	Sp. Cond. (mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity NTU)	
0950	28.17	Clear	None	18.18	1.99	0.10	6.67	-77	88.5	

Groundwater Field Log

Wilson Landfill

Site Name: Wilson LF	Well No. MW-113	Total Depth (ft.) 57.93	Initial Depth to Water (ft.)	Height of Water Column (ft.)	Date:	Time:
Site Location: Ohio Co, KY	AKGWA# 8007-1174	Casing Diameter ☐ 4" ☐ 2" Conversion fact. 4"-0.67 2"-0.16	Measuring Point (ft.) 411.61	Groundwater Elevation (ft.)	Well Vol. (Gal.)	PO #

☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☐ Fog ☐ Clear ☐ Partly Cloudy ☐ Windy Temp. _____ (F°)

Time	ET (min)	Depth to Water (ft.)	Purge Rate ml/min	Volume Purged (L)	Temp (°C)	Sp. Cond. (mS)	DO Mg/L	pH (SU)	eH/ORP (mV)	Turbidity (NTU)
0940	50	27.95	200	10	17.95	1.99	0.10	6.67	-76	64.5
0945	55	28.05	200	11	18.00	1.99	0.09	6.67	-76	82.6
0950	60	28.17	200	12	18.18	1.99	0.10	6.67	-77	88.5
For three (3) consecutive Readings		Required Purge	Actual Purge	+/- 3% (°C)	+/- 3%	+/- 10% <0.5mg/l stable	+/- .10 (SU)	+/- 10 mV	+/- 10% unless <5 NTU consider stable	

Well Condition	Pad Condition	Lock Functioning	Bladder Pump	Casing SS ☐ Casing PVC ☐	☐ Field Blank Collected Time:	☐ Duplicated Collected Time:
		☐ Yes ☐ No	☐ Yes ☐ No	Filtered: ☐ Yes ☐ No	Split Sample ☐ Yes ☐ No With:	Semi-Annual ☐

Sample Time	Depth to Water	Color	Odor	Temp. (C°)	Sp. Cond. (mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity NTU)
0950	28.17	Clear	None	18.18	1.99	0.10	6.67	-77	88.5

Groundwater Field Log

Wilson Landfill

Site Name: Wilson LF	Well No. MW-114	Total Depth (ft.) 50.32	Initial Depth to Water (ft.) 13.42	Height of Water Column (ft.) 36.90	Date: 4/16/24	Time: 1245				
Site Location: Ohio Co, KY	AKGWA# 8007-8613	Casing Diameter ☐ 4" ☒ 2" Conversion fact. 4"-0.67 2"-0.16	Measuring Point (ft.) 404.18	Groundwater Elevation (ft.) 390.76	Well Vol. (Gal.) 5.90	PO #				
☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☐ Fog ☐ Clear ☒ Partly Cloudy ☒ Windy Temp. 66 (F°)										
Time	ET (min)	Depth to Water (ft.)	Purge Rate ml/min	Volume Purged (L)	Temp (°C)	Sp. Cond. (mS)	DO Mg/L	pH (SU)	eH/ORP (mV)	Turbidity (NTU)
1215	0	13.42	200	0	21.94	0.98	2.70	7.31	5	40.5
1220	5	13.71	200	1	20.98	0.93	1.83	7.28	-32	20.3
1225	10	13.85	200	2	20.80	0.92	1.62	7.28	-42	7.5
1230	15	13.98	200	3	20.43	0.92	1.46	7.25	-49	2.5
1235	20	14.00	200	4	20.38	0.91	1.36	7.24	-54	1.8
1240	25	14.01	200	5	20.43	0.91	1.25	7.25	-54	0.0
1245	30	14.03	200	6	20.42	0.91	1.26	7.25	-57	0.0
For three (3) consecutive Readings		Required Purge	Actual Purge	+/- 3% (°C)	+/- 3%	+/- 10% <0.5mg/l stable	+/- .10 (SU)	+/- 10 mV	+/- 10% unless <5 NTU consider stable	
Well Condition	Pad Condition	Lock Functioning	Bladder Pump	Casing SS ☐ Casing PVC ☒	☐ Field Blank Collected Time:		☐ Duplicated Collected Time:			
Good	Good	☒ Yes ☐ No	☒ Yes ☐ No	Filtered: ☐ Yes ☒ No	Split Sample ☐ Yes ☒ No With:		Semi-Annual ☒			
Sample Time	Depth to Water	Color	Odor	Temp. (°C)	Sp. Cond. (mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity NTU)	
1245	14.03	Good	None	20.42	0.91	1.26	7.25	-57	0.0	

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CCR GROUNDWATER FIELD LOG

Auto cal
pH 4.00
ms/cm 4.84
NTU 0.1
mg/L DO 9.39

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WILSON LANDFILL

Site Name: Wilson LF	Well No. MW-4D	Total Depth (ft.) 93.5	Initial Depth to Water (ft.) 24.23	Height of Water Column (ft.) 69.27	Date: 10/1/24	Time: 0735 0740
Site Location: Ohio Co, KY	AKGWA# 8007-4811	Casing Diameter ☐ 4" ☒ 2" Conversion fact. 4"-0.67 2"-0.16	Measuring Point (ft.) 410.02	Groundwater Elevation (ft.) 385.79	Well Vol. (Gal.) 11.08	PO #

☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☒ Fog ☐ Clear ☐ Partly Cloudy ☐ Windy Temp. 67 (F°)

Time	ET (min)	Depth to Water (ft.)	Purge Rate ml/min	Volume Purged (L)	Temp (°C)	Sp. Cond. (mS)	DO Mg/L	pH (SU)	eH/ORP (mV)	Turbidity (NTU)
0640	0	24.23	100	0	19.27	4.27	4.05	6.40	-24	56.5
0645	5	24.23	100	0.5	19.29	5.02	1.58	6.39	-48	71.1
0650	10	24.23	100	1.0	19.29	5.11	1.90	6.37	-55	65.8
0655	15	24.23	100	1.5	19.25	5.12	1.89	6.37	-58	56.9
0700	20	24.23	100	2.0	19.26	5.11	1.70	6.37	-59	50.6
0705	25	24.23	100	2.5	19.25	5.10	1.57	6.36	-60	43.4
0710	30	24.23	100	3.0	19.27	5.09	1.62	6.37	-60	37.5
0715	35	24.23	100	3.5	19.32	5.09	1.52	6.36	-60	34.1
0720	40	24.23	100	4.0	19.32	5.09	1.36	6.36	-60	30.8
0725	45	24.23	100	4.5	19.32	5.08	1.01	6.35	-60	29.0
For three (3) consecutive Readings			Required Purge	Actual Purge	+/- 3% (°C)	+/- 3%	+/- 10% <0.5mg/l stable	+/- .10 (SU)	+/- 10 mV	+/- 10% unless <5 NTU consider stable

Well Condition good	Pad Condition good	Lock Functioning ☒ Yes ☐ No	Bladder Pump ☒ Yes ☐ No	Casing SS ☐ Casing PVC ☒	☐ Field Blank Collected Time:	☐ Duplicated Collected Time:			
Filtered: ☐ Yes ☒ No		Split Sample ☐ Yes ☒ No With:		Semi-Annual					
Sample Time 0735	Depth to Water 24.23	Color clear	Odor none	Temp. (C°) 19.44	Sp. Cond. (mS) 5.08	DO (mg/L) 1.12	pH (SU) 6.36	eH/ORP (mV) -60	Turbidity NTU 26.1

CCR GROUNDWATER FIELD LOG

WILSON LANDFILL

Site Name:	Well No.	Total Depth (ft.)	Initial Depth to Water (ft.)	Height of Water Column (ft.)	Date:	Time:
Wilson LF	MW-4D	93.5	24.23		10/1/24	
Site Location:	AKGWA#	Casing Diameter ☐ 4" ☐ 2"	Measuring Point (ft.)	Groundwater Elevation (ft.)	Well Vol. (Gal.)	PO #
Ohio Co, KY	8007-4811	Conversion fact. 4"-0.67 2"-0.16	410.02			

☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☐ Fog ☐ Clear ☐ Partly Cloudy ☐ Windy Temp. _____ (F°)

Time	ET (min)	Depth to Water (ft.)	Purge Rate ml/min	Volume Purged (L)	Temp (°C)	Sp. Cond. (mS)	DO Mg/L	pH (SU)	eH/ORP (mV)	Turbidity (NTU)
0730	50	24.23	100	5.0	19.41	5.08	1.04	6.35	-60	27.3
0735	55	24.23	100	5.5	19.44	6.08	1.12	6.34	-60	26.1
For three (3) consecutive Readings			Required Purge	Actual Purge	+/- 3% (°C)	+/- 3%	+/- 10% 10% <0.5mg/l stable	+/- .10 (SU)	+/- 10 mV	+/- 10% unless <5 NTU consider stable

Well Condition	Pad Condition	Lock Functioning	Bladder Pump	Casing SS ☐ Casing PVC ☐	☐ Field Blank Collected Time:	☐ Duplicated Collected Time:			
		☐ Yes ☐ No	☐ Yes ☐ No	Filtered: ☐ Yes ☐ No	Split Sample ☐ Yes ☐ No With:	Semi-Annual ☐			
Sample Time	Depth to Water	Color	Odor	Temp. (C°)	Sp. Cond. (mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity NTU
0735	24.23	Clear	None	19.44	5.08	1.12	6.34	-60	26.1

Groundwater Field Log

Wilson Landfill

Site Name:	Well No.	Total Depth (ft.)	Initial Depth to Water (ft.)	Height of Water Column (ft.)	Date:	Time:
Wilson LF	MW-5	75.0	56.04	413.10	10-1-2024	8:05
Site Location:	AKGWA#	Casing Diameter ☐ 4" ☒ 2"	Measuring Point (ft.)	Groundwater Elevation (ft.)	Well Vol. (Gal.)	PO #
Ohio Co, KY	8005-3477	Conversion fact. 4"-0.67 2"-0.16	469.14	18.96	66.09	

☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☐ Fog ☐ Clear ☒ Partly Cloudy ☐ Windy

Temp. 67 (F°)

Time	ET (min)	Depth to Water (ft.)	Purge Rate ml/min	Volume Purged (L)	Temp (°C)	Sp. Cond. (mS)	DO Mg/L	pH (SU)	eH/ORP (mV)	Turbidity (NTU)
0705	0	56.00	100ml	0	19.89	4.31	2.93	6.38	24	1000
0710	5	56.10	100ml	.5	18.92	4.35	1.67	6.35	-8	1000
0715	10	56.10	100ml	1	18.54	4.35	.85	6.33	-23	437
0720	15	56.10	100ml	1.5	18.39	4.35	.57	6.33	-29	193
0725	20	56.15	100ml	2	18.28	4.35	.40	6.33	-31	124
0730	25	56.15	100ml	2.5	18.27	4.34	.32	6.32	-33	84.2
0735	30	56.15	100ml	3	18.23	4.33	.16	6.33	-33	57.4
0740	35	56.15	100ml	3.5	18.19	4.33	.18	6.33	-33	46.2
0745	40	56.15	100ml	4	18.19	4.33	.10	6.32	-34	35.7
0750	45	56.15	100ml	4.5	18.22	4.32	.08	6.32	-35	28.9
For three (3) consecutive Readings			Required Purge	Actual Purge	+/- 3% (°C)	+/- 3%	+/- 10% <0.5mg/l stable	+/- .10 (SU)	+/- 10 mV	+/- 10% unless <5 NTU consider stable

Well Condition	Pad Condition	Lock Functioning	Bladder Pump	Casing SS ☐	Casing PVC ☒	Field Blank Collected Time: 8:50	Duplicate Collected Time:
Good	Good	☒ Yes ☐ No	☒ Yes ☐ No	Filtered: ☐ Yes ☒ No	Split Sample ☐ Yes ☐ No	With:	Semi-Annual ☒

Sample Time	Depth to Water	Color	Odor	Temp. (C°)	Sp. Cond. (mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity NTU)
8:05	56.15	clear	none	18.17	4.32	.04	6.32	-36	20.2

Groundwater Field Log

Wilson Landfill

Site Name: Wilson LF	Well No. MW-5	Total Depth (ft.) 75.0	Initial Depth to Water (ft.) 56.04	Height of Water Column (ft.) 413.10	Date: 10-1-2024	Time: 8:05
Site Location: Ohio Co, KY	AKGWA# 8005-3477	Casing Diameter ☐ 4" ☐ 2" Conversion fact. 4"-0.67 2"-0.16	Measuring Point (ft.) 469.14	Groundwater Elevation (ft.) 18.96	Well Vol. (Gal.) 66.09	PO #

☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☐ Fog ☐ Clear ☐ Partly Cloudy ☐ Windy Temp. (F°)

Time	ET (min)	Depth to Water (ft.)	Purge Rate ml/min	Volume Purged (L)	Temp (°C)	Sp. Cond. (mS)	DO Mg/L	pH (SU)	eH/ORP (mV)	Turbidity (NTU)
07:55	50	56.15	100ml	5	18.17	4.33	.06	6.32	-35	25.3
08:00	55	56.15	100ml	5.5	18.19	4.32	.06	6.32	-35	23.7
08:05	60	56.15	100ml	6	18.17	4.32	.04	6.32	-36	20.2
For three (3) consecutive Readings			Required Purge	Actual Purge	+/- 3% (°C)	+/- 3%	+/- 10% <0.5mg/l stable	+/- .10 (SU)	+/- 10 mV	+/- 10% unless <5 NTU consider stable

Well Condition	Pad Condition	Lock Functioning	Bladder Pump	Casing SS ☐ Casing PVC ☒	☒ Field Blank Collected Time: 8:50	☐ Duplicated Collected Time:
good	good	☒ Yes ☐ No	☒ Yes ☐ No	Filtered: ☐ Yes ☒ No	Split Sample ☐ Yes ☒ No With:	Semi-Annual ☒

Sample Time	Depth to Water	Color	Odor	Temp. (C°)	Sp. Cond. (mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity NTU)
8:05	56.15	clear	none	18.17	4.32	.04	6.32	-36	20.2

Groundwater Field Log

Wilson Landfill

Site Name: Wilson LF	Well No. MW-6	Total Depth (ft.) 53.50	Initial Depth to Water (ft.) 41.82	Height of Water Column (ft.) 11.68	Date: 9/30/24	Time: 1435
Site Location: Ohio Co, KY	AKGWA# 8005-3476	Casing Diameter ☐ 4" ☐ 2" Conversion fact. 4"-0.67 2"-0.16	Measuring Point (ft.) 433.06	Groundwater Elevation (ft.) 391.24	Well Vol. (Gal.) 1.86	PO #

☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☐ Fog ☐ Clear ☒ Partly Cloudy ☐ Windy Temp. **77** (F°)

Time	ET (min)	Depth to Water (ft.)	Purge Rate ml/min	Volume Purged (L)	Temp (°C)	Sp. Cond. (mS)	DO Mg/L	pH (SU)	eH/ORP (mV)	Turbidity (NTU)
1435	0	41.82	100	0	22.44	3.11	2.88	6.04	10	8.3
1440	5	41.82	100	0.5	20.36	3.15	1.27	6.60	-2	3.9
1445	10	41.82	100	1.0	20.03	3.15	0.49	6.58	-8	2.7
1450	15	41.82	100	1.5	19.81	3.16	0.41	6.58	-12	1.6
1455	20	41.82	100	2.0	19.77	3.15	0.35	6.56	-13	0.9

For three (3) consecutive Readings	Required Purge	Actual Purge	+/- 3% (°C)	+/- 3%	+/- 10% <0.5mg/l stable	+/- .10 (SU)	+/- 10 mV	+/- 10% unless <5 NTU consider stable
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Well Condition	Pad Condition	Lock Functioning	Bladder Pump	Casing SS ☐ Casing PVC ☒	☐ Field Blank Collected Time:	☒ Duplicated Collected Time: 1540
good	good	☒ Yes ☐ No	☒ Yes ☐ No	Filtered: ☐ Yes ☒ No	Split Sample ☐ Yes ☒ No With:	Semi-Annual ☒

Sample Time	Depth to Water	Color	Odor	Temp. (C°)	Sp. Cond. (mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity NTU)
1455	41.82	Clear	None	19.77	3.15	0.35	6.56	-13	0.9

Groundwater Field Log

Wilson Landfill

Site Name:	Well No.	Total Depth (ft.)	Initial Depth to Water (ft.)	Height of Water Column (ft.)	Date:	Time:
Wilson LF	MW-7	50.00	56.04 40.31	9.69	10/1/24 9/30/24	0800
Site Location:	AKGWA#	Casing Diameter ☐ 4" ☒ 2"	Measuring Point (ft.)	Groundwater Elevation (ft.)	Well Vol. (Gal.)	PO #
Ohio Co, KY	8005-3479	Conversion fact. 4"-0.67 2"-0.16	426.14	385.83	1.55	

☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☐ Fog ☐ Clear ☒ Partly Cloudy ☐ Windy

Temp. ⁶³~~75~~ (F°)

Time	ET (min)	Depth to Water (ft.)	Purge Rate ml/min	Volume Purged (L)	Temp (°C)	Sp. Cond. (mS)	DO Mg/L	pH (SU)	eH/ORP (mV)	Turbidity (NTU)
0700	0	40.31	100	0	18.79	2.67	1.09	6.40	-29	264.0
0705	5	40.31	100	0.5	18.85	2.66	0.54	6.45	-37	183
0710	10	40.31	100	1.0	18.79	2.66	0.32	6.46	-43	101
0715	15	40.31	100	1.5	18.71	2.66	0.32	6.48	-44	80.7
0720	20	40.31	100	2.0	18.70	2.66	0.29	6.48	-45	81.8
0725	25	40.31	100	2.5	18.67	2.66	0.23	6.48	-46	63.7
0730	30	40.31	100	3.0	18.67	2.66	0.20	6.48	-45	43.1
0735	35	40.31	100	3.5	18.70	2.67	0.23	6.48	-45	35.9
0740	40	40.31	100	4.0	18.71	2.67	0.20	6.48	-45	30.5
0745	45	40.31	100	4.5	18.70	2.67	0.19	6.48	-45	25.6
For three (3) consecutive Readings			Required Purge	Actual Purge	+/- 3% (°C)	+/- 3%	+/- 10% <0.5mg/l stable	+/- .10 (SU)	+/- 10 mV	+/- 10% unless <5 NTU consider stable

Well Condition	Pad Condition	Lock Functioning	Bladder Pump	Casing SS ☐	Casing PVC ☒	Field Blank Collected Time:	Duplicated Collected Time:
Good	Good	☒ Yes ☐ No	☒ Yes ☐ No	Filtered: ☐ Yes ☒ No	Split Sample ☐ Yes ☒ No With:		Semi-Annual ☒

Sample Time	Depth to Water	Color	Odor	Temp. (°C)	Sp. Cond. (mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity NTU
0800	40.31	Clear	None	18.67	2.67	0.15	6.48	-44	20.3

Groundwater Field Log

Wilson Landfill

Site Name: Wilson LF	Well No. MW-7	Total Depth (ft.) 50.00	Initial Depth to Water (ft.)	Height of Water Column (ft.)	Date:	Time:				
Site Location: Ohio Co, KY	AKGWA# 8005-3479	Casing Diameter ☐ 4" ☐ 2" Conversion fact. 4"-0.67 2"-0.16	Measuring Point (ft.) 426.14	Groundwater Elevation (ft.)	Well Vol. (Gal.)	PO #				
☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☐ Fog ☐ Clear ☐ Partly Cloudy ☐ Windy Temp. _____ (F°)										
Time	ET (min)	Depth to Water (ft.)	Purge Rate ml/min	Volume Purged (L)	Temp (°C)	Sp. Cond. (mS)	DO Mg/L	pH (SU)	eH/ORP (mV)	Turbidity (NTU)
0750	50	40.31	100	5.0	18.66	2.67	0.21	6.48	-44	23.7
0755	55	40.31	100	5.5	18.66	2.67	0.16	6.48	-44	19.2
0800	60	40.31	100	6.0	18.67	2.67	0.15	6.48	-44	20.3
For three (3) consecutive Readings		Required Purge	Actual Purge	+/- 3% (°C)	+/- 3%	+/- 10% <0.5mg/l stable	+/- .10 (SU)	+/- 10 mV	+/- 10% unless <5 NTU consider stable	
Well Condition	Pad Condition	Lock Functioning	Bladder Pump	Casing SS ☐	☐ Field Blank Collected Time:		☐ Duplicated Collected Time:			
		☐ Yes ☐ No	☐ Yes ☐ No	Casing PVC ☐	Filtered: ☐ Yes ☐ No	Split Sample ☐ Yes ☐ No With:	Semi-Annual ☐			
Sample Time	Depth to Water	Color	Odor	Temp. (C°)	Sp. Cond. (mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity NTU)	



3.98 pH
5.08 ms/cm
0.0 NTU
10.42 mg/L DO
114.6% DO

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Groundwater Field Log

Wilson Landfill

Site Name: Wilson LF	Well No. MW-8	Total Depth (ft.) 63.46	Initial Depth to Water (ft.) 44.31	Height of Water Column (ft.) 19.15	Date: 9.30.2024	Time: 1242				
Site Location: Ohio Co, KY	AKGWA# 8005-3475	Casing Diameter ☐ 4" ☒ 2" Conversion fact. 4"-0.67 2"-0.16	Measuring Point (ft.) 471.60	Groundwater Elevation (ft.) 427.29	Well Vol. (Gal.) 3.06	PO #				
☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☐ Fog ☐ Clear ☒ Partly Cloudy ☐ Windy Temp. 71 (F°)										
Time	ET (min)	Depth to Water (ft.)	Purge Rate ml/min	Volume Purged (L)	Temp (°C)	Sp. Cond. (mS)	DO Mg/L	pH (SU)	eH/ORP (mV)	Turbidity (NTU)
1242	0	44.31	100	0	19.16	1.80	0.69	6.67	-46	0.0
1247	5	44.31	100	0.5	19.23	1.81	0.50	6.64	-54	0.0
1252	10	44.31	100	1.0	19.29	1.81	0.45	6.66	-59	100
1257	15	44.31	100	1.5	20.51	1.77	2.26	6.76	-65	889
1302	20	44.31	100	2.0	19.42	1.81	0.99	6.68	-58	693
1307	25	44.31	100	2.5	19.37	1.80	0.48	6.67	-58	459
1312	30	44.31	100	3.0	19.38	1.80	0.42	6.66	-61	370
1317	35	44.31	100	3.5	19.36	1.79	0.43	6.66	-62	293
1322	40	44.31	100	4.0	19.49	1.79	0.40	6.66	-63	275
1327	45	44.31	100	4.5	19.52	1.79	0.45	6.66	-64	259
For three (3) consecutive Readings			Required Purge	Actual Purge	+/- 3% (°C)	+/- 3%	+/- 10% <0.5mg/l stable	+/- .10 (SU)	+/- 10 mV	+/- 10% unless <5 NTU consider stable
Well Condition	Pad Condition	Lock Functioning	Bladder Pump	Casing SS ☐	☐ Field Blank Collected Time:		☐ Duplicated Collected Time:			
good	good	☒ Yes ☐ No	☒ Yes ☐ No	Casing PVC ☒	Filtered: ☐ Yes ☒ No	Split Sample ☐ Yes ☒ No With:		Semi-Annual ☒		
Sample Time	Depth to Water	Color	Odor	Temp. (C°)	Sp. Cond. (mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity NTU)	
1327	44.31	clear	none	19.52	1.79	0.45	6.66	-64	259	

Groundwater Field Log

Wilson Landfill

Site Name: Wilson LF	Well No. MW-10	Total Depth (ft.) 22.42	Initial Depth to Water (ft.) 13.66	Height of Water Column (ft.) 8.76	Date: 9/30/21	Time: 1525
Site Location: Ohio Co, KY	AKGWA# 8005-3478	Casing Diameter ☐ 4" ☒ 2" Conversion fact. 4"-0.67 2"-0.16	Measuring Point (ft.) 398.91	Groundwater Elevation (ft.) 385.25	Well Vol. (Gal.) 1.40	PO #

☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☐ Fog ☐ Clear ☒ Partly Cloudy ☐ Windy Temp. **76** (F°)

Time	ET (min)	Depth to Water (ft.)	Purge Rate ml/min	Volume Purged (L)	Temp (°C)	Sp. Cond. (mS)	DO Mg/L	pH (SU)	eH/ORP (mV)	Turbidity (NTU)
1450	0	13.66	100	0	22.27	2.46	3.93	5.96	18	19.1
1455	5	14.68	100	0.5	22.23	2.48	1.34	5.94	20	9.5
1500	10	15.93	100	1.0	22.60	2.46	0.87	5.92	22	6.3
1505	15	16.18	100	1.5	22.31	2.48	0.66	5.92	25	4.1
1510	20	16.62	100	2.0	22.19	2.48	0.48	5.92	26	3.5
1515	25	16.95	100	2.5	22.10	2.49	0.39	5.91	29	8.9
1520	30	17.23	100	3.0	22.16	2.50	0.39	5.92	29	8.5
1525	35	17.45	100	3.5	21.98	2.50	0.39	5.92	28	9.1
For three (3) consecutive Readings			Required Purge	Actual Purge	+/- 3% (°C)	+/- 3%	+/- 10% <0.5mg/l stable	+/- .10 (SU)	+/- 10 mV	+/- 10% unless <5 NTU consider stable

Well Condition	Pad Condition	Lock Functioning	Bladder Pump	Casing SS ☐ Casing PVC ☒	☐ Field Blank Collected Time:	☐ Duplicated Collected Time:
Good	Good	☒ Yes ☐ No	☒ Yes ☐ No	Filtered: ☐ Yes ☒ No	Split Sample ☐ Yes ☒ No With:	Semi-Annual ☒

Sample Time	Depth to Water	Color	Odor	Temp. (C°)	Sp. Cond. (mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity NTU)
1525	17.45	Clear	None	21.98	2.50	0.39	5.92	28	9.1

Groundwater Field Log

Wilson Landfill

Site Name: Wilson LF	Well No. MW-10D	Total Depth (ft.) 76.95	Initial Depth to Water (ft.) 13.68	Height of Water Column (ft.) 63.27	Date: 10/1/24	Time: 1040
Site Location: Ohio Co, KY	AKGWA# 8007-8616	Casing Diameter ☐ 4" ☒ 2" Conversion fact. 4"-0.67 2"-0.16	Measuring Point (ft.) 399.00	Groundwater Elevation (ft.) 385.32	Well Vol. (Gal.) 10.12	PO #

☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☐ Fog ☐ Clear ☐ Partly Cloudy ☐ Windy Temp. (F°)

Time	ET (min)	Depth to Water (ft.)	Purge Rate ml/min	Volume Purged (L)	Temp (°C)	Sp. Cond. (mS)	DO Mg/L	pH (SU)	eH/ORP (mV)	Turbidity (NTU)
1010	0	13.68	100	0	22.88	3.35	2.78	6.48	-39	22.8
1015	5	13.71	100	0.5	22.28	3.41	0.85	6.31	-45	3.3
1020	10	13.73	100	1.0	22.44	3.43	0.60	6.27	-46	0.2
1025	15	13.75	100	1.5	22.90	3.44	0.35	6.24	-49	0.0
1030	20	13.75	100	2.0	22.95	3.45	0.33	6.25	-51	0.0
1035	25	13.75	100	2.5	23.05	3.45	0.16	6.21	-51	0.0
1040	30	13.75	100	3.0	22.93	3.45	0.24	6.22	-51	0.0
For three (3) consecutive Readings			Required Purge	Actual Purge	+/- 3% (°C)	+/- 3%	+/- 10% <0.5mg/l stable	+/- .10 (SU)	+/- 10 mV	+/- 10% unless <5 NTU consider stable

Well Condition	Pad Condition	Lock Functioning	Bladder Pump	Casing SS ☐ Casing PVC ☒	☐ Field Blank Collected Time:	☐ Duplicated Collected Time:
Good	Good	☒ Yes ☐ No	☒ Yes ☐ No	Filtered: ☐ Yes ☒ No	Split Sample ☐ Yes ☒ No With:	Semi-Annual ☒

Sample Time	Depth to Water	Color	Odor	Temp. (C°)	Sp. Cond. (mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity NTU)
1040	13.75	Clear	None	22.93	3.45	0.24	6.22	-51	0.0

CCR GROUNDWATER FIELD LOG

Wilson Landfill

Site Name:	Well No.	Total Depth (ft.)	Initial Depth to Water (ft.)	Height of Water Column (ft.)	Date:	Time:
Wilson LF	MW-102	36.5	11.53	24.97	9/30/24	1015
Site Location:	AKGWA#	Casing Diameter □ 4" ■ 2"	Measuring Point (ft.)	Groundwater Elevation (ft.)	Well Vol. (Gal.)	PO#
Ohio Co, KY	8007-2995	Conversion fact. 4"-0.67 2"-0.16	399.71	388.18	3.99	

☐ Rain
 ☐ Sleet/Freezing Rain
 ☐ Snow
 ☒ Fog
 ☐ Clear
 ☐ Partly Cloudy
 ☐ Windy
 Temp. 71 (F°)

Time	ET (min)	Depth to Water (ft.)	Purge Rate ml/min	Volume Purged (L)	Temp (°C)	Sp. Cond. (mS)	DO Mg/L	pH (SU)	eH/ORP (mV)	Turbidity (NTU)
1015	0	11.53	100	0	19.25	1.30	2.39	7.10	-43	504
1020	5	11.53	100	0.5	19.10	1.27	2.00	7.04	-43	714
1025	10	14.94	100	1.0	18.92	1.25	1.87	6.99	-46	452
1030	15	14.94	100	1.5	18.82	1.23	1.85	6.99	-50	300
1035	20	14.94	100	2.0	18.71	1.23	1.84	6.98	-54	200
1040	25	16.53	100	2.5	18.67	1.22	1.85	6.98	-56	150
1045	30	16.53	100	3.0	18.61	1.21	1.87	6.98	-58	110
1050	35	16.53	100	3.5	18.48	1.21	1.95	6.97	-59	80.7
1055	40	17.52	100	4.0	18.42	1.21	1.73	6.97	-59	80.4
1100	45	17.52	100	4.5	18.38	1.21	1.69	6.96	-61	75.5
For three (3) consecutive Readings			Required Purge	Actual Purge	+/- 3% (°C)	+/- 3%	+/- 10% <0.5mg/l stable	+/- .10 (SU)	+/- 10 mV	+/- 10% unless <5 NTU consider stable

Well Condition	Pad Condition	Lock Functioning	Bladder Pump	Casing SS ☐ Casing PVC ☒	☐ Field Blank Collected Time:	☐ Duplicated Collected Time:			
good	good	☒ Yes ☐ No	☒ Yes ☐ No	Filtered: ☐ Yes ☒ No	Split Sample ☐ Yes ☒ No With:	Semi-Annual ☒			
Sample Time	Depth to Water	Color	Odor	Temp. (C°)	Sp. Cond. (mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity (NTU)
1100	17.52	Clear	None	18.38	1.21	1.69	6.96	-60	75.5

CCR GROUNDWATER FIELD LOG

Wilson Landfill

Site Name: Wilson LF	Well No. MW-104	Total Depth (ft.) 40.5	Initial Depth to Water (ft.) 7.15	Height of Water Column (ft.) 33.35	Date: 9/30/24	Time: 0810
Site Location: Ohio Co, KY	AKGWA# 8007-2994	Casing Diameter ☐ 4" ☒ 2" Conversion fact. 4"-0.67 2"-0.16	Measuring Point (ft.) 392.87	Groundwater Elevation (ft.) 385.72	Well Vol. (Gal.) 5.33	PO #

☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☒ Fog ☐ Clear ☐ Partly Cloudy ☐ Windy Temp. **67** (F°)

Time	ET (min)	Depth to Water (ft.)	Purge Rate ml/min	Volume Purged (L)	Temp (°C)	Sp. Cond. (mS)	DO Mg/L	pH (SU)	eH/ORP (mV)	Turbidity (NTU)
0810	0	12.40	100	0	18.77	2.27	0.13	6.88	-59	11.6
0815	5	12.40	100	0.5	19.27	2.15	0.10	6.85	-56	10.4
0820	10	13.71	100	1.0	19.19	2.09	0.13	6.89	-58	16.1
0825	15	13.71	100	1.5	19.32	2.09	0.17	6.90	-60	17.0
0830	20	13.71	100	2.0	19.19	2.13	0.17	6.89	-62	21.8
0835	25	14.62	100	2.5	19.00	2.12	0.17	6.89	-62	34.4
0840	30	14.62	100	3.0	18.99	2.13	0.19	6.89	-63	44.2
0845	35	14.62	100	3.5	18.95	2.13	0.17	6.89	-63	56.6
0850	40	15.80	100	4.0	18.91	2.14	0.16	6.88	-64	44.3
0855	45	15.80	100	4.5	18.97	2.16	0.17	6.89	-64	63.0
For three (3) consecutive Readings			Required Purge	Actual Purge	+/- 3% (°C)	+/- 3%	+/- 10% <0.5mg /l stable	+/- .10 (SU)	+/- 10 mV	+/- 10% unless <5 NTU consider stable

Well Condition good	Pad Condition good	Lock Functioning ☒ Yes ☐ No	Bladder Pump ☒ Yes ☐ No	Casing SS ☐ Casing PVC ☒	☐ Field Blank Collected Time:	☐ Duplicated Collected Time:			
				Filtered: ☐ Yes ☒ No	Split Sample ☐ Yes ☒ No With:	Semi-Annual ☒			
Sample Time	Depth to Water	Color	Odor	Temp. (C°)	Sp. Cond. (mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity (NTU)

CCR GROUNDWATER FIELD LOG

Wilson Landfill

Site Name: Wilson LF	Well No. MW-104	Total Depth (ft.) 40.5	Initial Depth to Water (ft.)	Height of Water Column (ft.)	Date: 9/30/24	Time:
Site Location: Ohio Co, KY	AKGWA# 8007-2994	Casing Diameter ☐ 4" ☐ 2" Conversion fact. 4"-0.67 2"-0.16	Measuring Point (ft.) 392.87	Groundwater Elevation (ft.)	Well Vol. (Gal.)	PO #

☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☐ Fog ☐ Clear ☐ Partly Cloudy ☐ Windy Temp. _____ (F°)

Time	ET (min)	Depth to Water (ft.)	Purge Rate ml/min	Volume Purged (L)	Temp (°C)	Sp. Cond. (mS)	DO Mg/L	pH (SU)	eH/ORP (mV)	Turbidity (NTU)
0900	50	15.80	100	5.0	19.04	2.16	0.16	6.89	-65	77.4
0905	55	16.07	100	5.5	19.00	2.16	0.24	6.88	-65	106
0910	60	16.07	106	6.0	19.02	2.18	0.21	6.88	-66	0.0
For three (3) consecutive Readings			Required Purge	Actual Purge	+/- 3% (°C)	+/- 3%	+/- 10% <0.5mg /l stable	+/- .10 (SU)	+/- 10 mV	+/- 10% unless <5 NTU consider stable

Well Condition good	Pad Condition good	Lock Functioning ☒ Yes ☐ No	Bladder Pump ☒ Yes ☐ No	Casing SS ☐ Casing PVC ☐	☐ Field Blank Collected Time:	☐ Duplicated Collected Time:			
				Filtered: ☐ Yes ☐ No	Split Sample ☐ Yes ☐ No With:	Semi-Annual ☐			
Sample Time	Depth to Water	Color	Odor	Temp. (C°)	Sp. Cond. (mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity (NTU)
0910	16.07	Clear	none	19.02	2.18	0.21	6.88	-66	0.0



4.01 pH
5.07 mS/cm
0.0 NTU
9.76 mg/L DO

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CCR GROUNDWATER FIELD LOG

Wilson Landfill

Site Name: Wilson LF	Well No. MW-105R	Total Depth (ft.) 37.87	Initial Depth to Water (ft.) 8.12	Height of Water Column (ft.) 29.75	Date: 9/30/24	Time: 0648
Site Location: Ohio Co, KY	AKGWA# 8007-1175	Casing Diameter ☐ 4" ☒ 2" Conversion fact. 4"-0.67 2"-0.16	Measuring Point (ft.) 397.13	Groundwater Elevation (ft.) 389.01	Well Vol. (Gal.) 4.76 59.5	PO #

☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☒ Fog ☐ Clear ☐ Partly Cloudy ☐ Windy Temp. **66** (F°)

Time	ET (min)	Depth to Water (ft.)	Purge Rate ml/min	Volume Purged (L)	Temp (°C)	Sp. Cond. (mS)	DO Mg/L	pH (SU)	eH/ORP (mV)	Turbidity (NTU)
0648	0	10.90	100	0	18.78	1.34	0.60	6.65	-84	0.0
0653	5	10.90	100	0.5	19.48	1.33	0.84	6.87	-101	0.0
0658	10	10.90	100	1.0	19.50	1.32	0.96	6.96	-110	0.0
0703	15	14.03	100	1.5	19.43	1.32	1.03	6.97	-114	0.0
0708	20	14.03	100	2.0	19.38	1.31	1.14	6.98	-115	0.4
For three (3) consecutive Readings			Required Purge	Actual Purge	+/- 3% (°C)	+/- 3%	+/- 10% <0.5mg /l stable	+/- .10 (SU)	+/- 10 mV	+/- 10% unless <5 NTU consider stable

Well Condition good	Pad Condition good	Lock Functioning ☒ Yes ☐ No	Bladder Pump ☒ Yes ☐ No	Casing SS ☐ Casing PVC ☒	☐ Field Blank Collected Time:	☐ Duplicated Collected Time:			
Filtered: ☐ Yes ☒ No	Split Sample ☐ Yes ☒ No With:	Semi-Annual ☐							
Sample Time 0708	Depth to Water 14.03	Color Clear	Odor none	Temp. (C°) 19.38	Sp. Cond. (mS) 1.31	DO (mg/L) 1.14	pH (SU) 6.98	eH/ORP (mV) -115	Turbidity (NTU) 0.4



3.98 pH
5.08 mS/cm
0.0 NTU
10.42 mg/L DO
114.6% DO

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CCR GROUNDWATER FIELD LOG

Wilson Landfill

Site Name: Wilson LF	Well No. MW-110	Total Depth (ft.) 39.5	Initial Depth to Water (ft.) 9.55	Height of Water Column (ft.) 29.95	Date: 9.30.2024	Time: 07:30
Site Location: Ohio Co, KY	AKGWA# 8007-2996	Casing Diameter ☐ 4" ☒ 2" Conversion fact. 4"-0.67 2"-0.16	Measuring Point (ft.) 393.54	Groundwater Elevation (ft.) 383.99	Well Vol. (Gal.) 4.79	PO #

☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☒ Fog ☐ Clear ☒ Partly Cloudy ☐ Windy Temp. **66** (F°)

Time	ET (min)	Depth to Water (ft.)	Purge Rate ml/min	Volume Purged (L)	Temp (°C)	Sp. Cond. (mS)	DO Mg/L	pH (SU)	eH/ORP (mV)	Turbidity (NTU)
06:55	0	9.65	100ml	0	17.93	.568	1.55	6.67	-80	50.6
07:00	5	9.65	100ml	.5	18.57	.562	.71	6.67	-78	37.8
07:05	10	9.65	100ml	1	18.87	.539	.41	6.67	-78	70.3
07:10	15	9.65	100ml	1.5	18.98	.520	.29	6.70	-77	73.2
07:15	20	9.65	100ml	2	18.99	.508	.24	6.71	-77	68.3
07:20	25	9.65	100ml	2.5	19.00	.500	.19	6.72	-76	66.8
07:25	30	9.65	100ml	3	18.99	.494	.17	6.73	-73	63.7
07:30	35	9.65	100ml	3.5	19.02	.490	.15	6.73	-73	66.1
For three (3) consecutive Readings			Required Purge	Actual Purge	+/- 3% (°C)	+/- 3%	+/- 10% <0.5mg /l stable	+/- .10 (SU)	+/- 10 mV	+/- 10% unless <5 NTU consider stable

Well Condition good	Pad Condition good	Lock Functioning ☒ Yes ☐ No	Bladder Pump ☒ Yes ☐ No	Casing SS ☐ Casing PVC ☒	☐ Field Blank Collected Time: 08:10	☒ Duplicated Collected Dupl Time: 08:10			
		Filtered: ☐ Yes ☒ No	Split Sample ☐ Yes ☒ No With:		Semi-Annual ☒				
Sample Time	Depth to Water	Color	Odor	Temp. (C°)	Sp. Cond. (mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity (NTU)
07:30	9.65	clear	none	19.02	.490	.15	6.73	-73	66.1

Groundwater Field Log

Wilson Landfill

Site Name: Wilson LF	Well No. MW-111	Total Depth (ft.) 98.31	Initial Depth to Water (ft.) 81.02	Height of Water Column (ft.) 17.29	Date: 9/30/24	Time: 1035
Site Location: Ohio Co, KY	AKGWA# 8007-8615	Casing Diameter ☐ 4" ☒ 2" Conversion fact. 4"-0.67 2"-0.16	Measuring Point (ft.) 466.06	Groundwater Elevation (ft.) 385.04	Well Vol. (Gal.) 2.77	PO #

☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☐ Fog ☐ Clear ☒ Partly Cloudy ☐ Windy Temp. **67** (F°)

Time	ET (min)	Depth to Water (ft.)	Purge Rate ml/min	Volume Purged (L)	Temp (°C)	Sp. Cond. (mS)	DO Mg/L	pH (SU)	eH/ORP (mV)	Turbidity (NTU)
0935	0	81.02	100	0	18.76	2.49	4.19	6.61	-38	26.2
0940	5	81.02	100	0.5	18.75	2.48	1.70	6.50	-38	16.1
0945	10	81.02	100	1.0	18.63	2.46	1.04	6.47	-38	18.8
0950	15	81.02	100	1.5	18.69	2.45	0.76	6.45	-37	17.7
0955	20	81.02	100	2.0	18.67	2.45	0.73	6.45	-37	17.2
1000	25	81.02	100	2.5	18.78	2.45	0.70	6.45	-38	11.1
1005	30	81.02	100	3.0	18.79	2.45	0.81	6.43	-37	7.1
1010	35	81.02	100	3.5	18.75	2.45	0.78	6.41	-36	5.3
1015	40	81.02	100	4.0	18.78	2.45	0.64	6.42	-36	3.8
1020	45	81.02	100	4.5	18.82	2.45	0.61	6.42	-36	2.8
For three (3) consecutive Readings			Required Purge	Actual Purge	+/- 3% (°C)	+/- 3%	+/- 10% <0.5mg/l stable	+/- .10 (SU)	+/- 10 mV	+/- 10% unless <5 NTU consider stable

Well Condition	Pad Condition	Lock Functioning	Bladder Pump	Casing SS ☐ Casing PVC ☒	☐ Field Blank Collected Time:	☐ Duplicated Collected Time:
Good	Good	☒ Yes ☐ No	☒ Yes ☐ No	Filtered: ☐ Yes ☒ No	Split Sample ☐ Yes ☒ No With:	Semi-Annual ☒

Sample Time	Depth to Water	Color	Odor	Temp. (C°)	Sp. Cond. (mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity NTU
1035	81.02	Clear		18.99	2.44	0.64	6.39	-34	1.4

Groundwater Field Log

Wilson Landfill

Site Name: Wilson LF	Well No. MW-111	Total Depth (ft.) 98.31	Initial Depth to Water (ft.)	Height of Water Column (ft.)	Date:	Time:
Site Location: Ohio Co, KY	AKGWA# 8007-8615	Casing Diameter ☐ 4" ☐ 2" Conversion fact. 4"-0.67 2"-0.16	Measuring Point (ft.) 466.06	Groundwater Elevation (ft.)	Well Vol. (Gal.)	PO #

☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☐ Fog ☐ Clear ☐ Partly Cloudy ☐ Windy Temp. _____ (F°)

Time	ET (min)	Depth to Water (ft.)	Purge Rate ml/min	Volume Purged (L)	Temp (°C)	Sp. Cond. (mS)	DO Mg/L	pH (SU)	eH/ORP (mV)	Turbidity (NTU)
1025	50	81.02	100 5.0	5.0	18.93	2.44	0.65	6.40	-35	2.1
1030	55	81.02	100 5.5	5.5	18.89	2.45	0.54	6.41	-35	1.9
1035	60	81.02	100 6.0	6.0	18.99	2.44	0.64	6.39	-34	1.4
For three (3) consecutive Readings			Required Purge	Actual Purge	+/- 3% (°C)	+/- 3%	+/- 10% <0.5mg/l stable	+/- .10 (SU)	+/- 10 mV	+/- 10% unless <5 NTU consider stable

Well Condition	Pad Condition	Lock Functioning	Bladder Pump	Casing SS ☐ Casing PVC ☒	☐ Field Blank Collected Time:	☐ Duplicated Collected Time:
		☐ Yes ☐ No	☐ Yes ☐ No	Filtered: ☐ Yes ☐ No	Split Sample ☐ Yes ☐ No With:	Semi-Annual ☐

Sample Time	Depth to Water	Color	Odor	Temp. (C°)	Sp. Cond. (mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity NTU)

Groundwater Field Log

Wilson Landfill

Site Name: Wilson LF	Well No. MW-112	Total Depth (ft.) 54.01	Initial Depth to Water (ft.) 18.72	Height of Water Column (ft.) 35.29	Date: 10/2/24	Time: 0650
Site Location: Ohio Co, KY	AKGWA# 8007-8614	Casing Diameter ☐ 4" ☒ 2" Conversion fact. 4"-0.67 2"-0.16	Measuring Point (ft.) 403.82	Groundwater Elevation (ft.) 385.10	Well Vol. (Gal.) 5.04	PO #

☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☐ Fog ☒ Clear ☐ Partly Cloudy ☐ Windy Temp. **51** (F°)

Time	ET (min)	Depth to Water (ft.)	Purge Rate ml/min	Volume Purged (L)	Temp (°C)	Sp. Cond. (mS)	DO Mg/L	pH (SU)	eH/ORP (mV)	Turbidity (NTU)
0650	0	18.72	100	0	16.78	1.47	2.02	6.61	49	20.0
0655	5	18.72	100	0.5	16.51	1.46	1.42	6.70	10	14.2
0700	10	18.72	100	1.0	16.44	1.45	0.38	6.76	-12	13.7
0705	15	18.72	100	1.5	16.32	1.44	0.22	6.76	-18	12.4
0710	20	18.72	100	2.0	16.24	1.44	0.16	6.78	-22	12.2
For three (3) consecutive Readings			Required Purge	Actual Purge	+/- 3% (°C)	+/- 3%	+/- 10% <0.5mg/l stable	+/- .10 (SU)	+/- 10 mV	+/- 10% unless <5 NTU consider stable

Well Condition	Pad Condition	Lock Functioning	Bladder Pump	Casing SS ☐ Casing PVC ☒	☐ Field Blank Collected Time:	☐ Duplicated Collected Time:
good	good	☒ Yes ☐ No	☒ Yes ☐ No	Filtered: ☐ Yes ☒ No	Split Sample ☐ Yes ☒ No With:	Semi-Annual ☒

Sample Time	Depth to Water	Color	Odor	Temp. (C°)	Sp. Cond. (mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity NTU)
0710	18.72	Clear	none	16.24	1.44	0.16	6.78	-22	12.2



3.98 pH
6.94 mS/cm
0.0 NM
9.63 mg/L DO

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Groundwater Field Log

Wilson Landfill

Site Name: Wilson LF	Well No. MW-113	Total Depth (ft.) 57.93	Initial Depth to Water (ft.) 21.50	Height of Water Column (ft.) 36.43	Date: 9/30/24	Time: 0735
Site Location: Ohio Co, KY	AKGWA# 8007-1174	Casing Diameter ☐ 4" ☒ 2" Conversion fact. 4"-0.67 2"-0.16	Measuring Point (ft.) 411.61	Groundwater Elevation (ft.) 390.10	Well Vol. (Gal.) 5.82	PO #

☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☐ Fog ☐ Clear ☒ Partly Cloudy ☐ Windy Temp. **67** (F°)

Time	ET (min)	Depth to Water (ft.)	Purge Rate ml/min	Volume Purged (L)	Temp (°C)	Sp. Cond. (mS)	DO Mg/L	pH (SU)	eH/ORP (mV)	Turbidity (NTU)
0700	0	21.50	100	0	17.55	1.53	4.14	6.54	-77	12.5
0705	5	24.10	100	0.5	17.53	1.49	1.45	6.51	-79	0.0
0710	10	24.52	100	1.0	17.66	1.49	1.14	6.50	-80	0.0
0715	15	24.98	100	1.5	17.69	1.48	1.05	6.51	-79	0.0
0720	20	25.07	100	2.0	17.75	1.48	0.95	6.51	-79	0.0
0725	25	25.27	100	2.5	17.72	1.48	0.90	6.51	-78	0.0
0730	30	25.44	100	3.0	17.72	1.48	0.85	6.51	-78	0.0
0735	35	25.41	100	3.5	17.71	1.48	0.84	6.52	-77	0.0

For three (3) consecutive Readings	Required Purge	Actual Purge	+/- 3% (°C)	+/- 3%	+/- 10% <0.5mg/l stable	+/- .10 (SU)	+/- 10 mV	+/- 10% unless <5 NTU consider stable
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Well Condition	Pad Condition	Lock Functioning	Bladder Pump	Casing SS ☐ Casing PVC ☒	☐ Field Blank Collected Time:	☐ Duplicated Collected Time:
Good	Good	☒ Yes ☐ No	☒ Yes ☐ No	Filtered: ☐ Yes ☒ No	Split Sample ☐ Yes ☒ No With:	Semi-Annual ☒

Sample Time	Depth to Water	Color	Odor	Temp. (C°)	Sp. Cond. (mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity NTU)
0735	25.41	Clear	None	17.71 67	1.48	0.84	6.52	-77	0.0



3.98 pH
5.08 ms/cm
0.0 NTU
10.42 mg/L O₂
114.6 % O₂

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Groundwater Field Log

Wilson Landfill

Site Name: Wilson LF	Well No. MW-114	Total Depth (ft.) 50.32	Initial Depth to Water (ft.) 13.86	Height of Water Column (ft.) 36.46	Date: 9.30.2024	Time: 09:55				
Site Location: Ohio Co, KY	AKGWA# 8007-8613	Casing Diameter □ 4" ■ 2" Conversion fact. 4"-0.67 2"-0.16	Measuring Point (ft.) 404.18	Groundwater Elevation (ft.) 390.32	Well Vol. (Gal.) 5.83	PO #				
☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☐ Fog ☐ Clear ☒ Partly Cloudy ☐ Windy Temp. 68 (F°)										
Time	ET (min)	Depth to Water (ft.)	Purge Rate ml/min	Volume Purged (L)	Temp (°C)	Sp. Cond. (mS)	DO Mg/L	pH (SU)	eH/ORP (mV)	Turbidity (NTU)
09:20	0	14.0	100ml	0	20.26	.988	1.12	7.02	-31	5.3
09:25	5	14.63	100ml	.5	19.57	.995	.34	7.03	-49	4.2
09:30	10	14.86	100ml	1	19.36	.994	.49	7.05	-54	5.6
09:35	15	14.86	100ml	1.5	19.34	.992	.14	7.01	-56	13.3
09:40	20	14.94	100ml	2	19.31	.991	.08	7.02	-57	12.6
09:45	25	14.94	100ml	2.5	19.30	.987	.07	6.99	-57	29.8
09:50	30	14.95	100ml	3	19.28	.982	.06	6.99	-58	27.0
09:55	35	15.01	100ml	3.5	19.28	.980	.05	7.01	-58	30.2
10:00	40		100ml	4						
For three (3) consecutive Readings			Required Purge	Actual Purge	+/- 3% (°C)	+/- 3%	+/- 10% <0.5mg/l stable	+/- .10 (SU)	+/- 10 mV	+/- 10% unless <5 NTU consider stable
Well Condition	Pad Condition	Lock Functioning	Bladder Pump	Casing SS ☐ Casing PVC ☒	☐ Field Blank Collected Time:		☐ Duplicated Collected Time:			
good	good	■ Yes □ No	■ Yes □ No	Filtered: □ Yes ■ No	Split Sample ☐ Yes ■ No With:		Semi-Annual ■			
Sample Time	Depth to Water	Color	Odor	Temp. (C°)	Sp. Cond. (mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity NTU)	
09:55	15.01	clear	none	19.28	.980	.05	7.01	-58	30.2	

APPENDIX B - ANALYTICAL SUMMARY TABLES

WILSON LANDFILL - GROUNDWATER ANALYTICAL SUMMARY
MW-5

APPENDIX III CONSTITUENTS	GWPS	GWPS Criteria	DATE															
			4/4/2016	5/20/2016	8/25/2016	10/4/2016	2/15/2017	5/17/2017	8/16/2017	9/28/2017	10/12/2017	4/13/2018	7/12/2018	10/3/2018	6/30/2019			
			Baseline Events										Assessment		Re-sample	Assessment		
Boron			0.387 JB	0.282 JB	0.386 J	0.367 JB	0.839 J	0.981 JB	1.17	0.81 J	1.27		0.667 J	0.755 JB	ND	D2 U		
Calcium			673	472	509	464	471 B	514 B	480	493	480 B		504	471	670	D1		
Chloride			49.3 B	60.2 JB	73.5	89.8	160 B	169 B	180	158 B	261		69.3 B	94 B	159	D		
Fluoride	4.0 mg/L	MCL	ND J	ND J	ND	0.838	ND J	ND J	ND JB	ND J	2.88		ND J	ND J	ND	U		
Sulfate			1630	1950	1670 B	1570 B	1620	1530	2040 B	1860 B	1730 B		1520	1640 B	2060	D		
pH (Field Measurement)			6.59	6.34	7.17	6.93	5.94	6.92	6.77	6.46	7.18	6.67	6.13	6.25	6.39			
Total Dissolved Solids			2840	2960	2940	2930	3000	3100	3220	3090	3040		3210	3200	3440			
APPENDIX IV CONSTITUENTS																		
Antimony	0.006 mg/L	MCL	ND	ND	ND J	ND JB	ND	ND JB	ND JB	ND J	NA	ND JB	ND J	NA	ND	U		
Arsenic	0.0144 mg/L	Background	0.00524 J	0.00523	0.00577 B	ND J	ND J	ND JB	ND J	ND J	NA	ND J	ND J	ND J	0.0025			
Barium	2.0 mg/L	MCL	ND J	ND J	ND J	ND J	ND J	ND J	ND J	ND J	NA	ND J	ND J	NA	0.01			
Beryllium	0.004 mg/L	MCL	ND	ND J	ND J	ND J	ND	ND J	ND J	ND	NA	ND	NA	NA	ND	U		
Cadmium	0.005 mg/L	MCL	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	ND	U		
Chromium	0.1 mg/L	MCL	ND	ND J	0.00309 B	ND J	ND	ND J	ND J	ND	NA	ND J	ND	NA	ND	U		
Cobalt	0.009 mg/L	Background	0.00909 J	0.00829	0.00659	0.00664	0.00518	0.0057	ND J	0.0051	NA	0.00873	0.00672	0.0066	0.009			
Fluoride	4.0 mg/L	MCL	ND J	ND J	ND	0.838	ND J	ND J	ND JB	ND J	NA	ND J	ND J	ND J	ND	U		
Lead	0.015 mg/L	CCR Rule Value	ND	ND	ND J	ND JB	ND J	ND J	ND J	ND J	NA	ND J	ND J	NA	ND	U		
Lithium	0.040 mg/L	CCR Rule Value	0.0243 J	0.0283 J	0.0374 J	0.0338 J	0.0432	0.042 J	0.0489 J	0.0398	NA	0.0370 J	0.0375 J	0.0382 J	0.03			
Mercury	0.002 mg/L	MCL	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	ND	U		
Molybdenum	0.1 mg/L	CCR Rule Value	ND J	ND J	ND J	ND J	ND J	ND J	ND J	ND J	NA	ND J	ND J	ND J	0.004 J			
Radium 226	5.0 pCi/L	MCL	0.645	0.915	0.714	1.19	1.01	0.967	1.22	1.01	NA	0.783	0.711	1.23	1.8			
Radium 228																		
Selenium	0.05 mg/L	MCL	ND	ND J	ND J	ND J	ND J	ND JB	ND J	ND	NA	ND J	ND J	NA	ND	U		
Thallium	0.002 mg/L	MCL	ND	ND J	ND	ND J	ND	ND J	ND J	ND	NA	ND	ND	NA	ND	U		

*All results listed in milligrams per liter (mg/L) unless otherwise noted by the Groundwater Protection Standard (GWPS).
B = compound was found in the blank and sample.
CCR = coal combustion residuals
J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
MCL = maximum contaminant level
NA = not analyzed
ND = not detected at or above method detection limit.
pCi/L = picocuries per liter

WILSON LANDFILL - GROUNDWATER ANALYTICAL SUMMARY (continued)
MW-5

APPENDIX III CONSTITUENTS	GWPS	GWPS Criteria																						
			11/6/2019		4/22/2020		10/13/2020		5/13/2021		9/30/2021		4/27/2022		9/26/2022		4/25/2023		10/2/2023		4/17/2024		10/1/2024	
			Assessment																					
Boron			ND	D2 U	0.66		0.69		0.68		0.70		0.75		0.73	M2	0.75		0.75	M2	0.86	M1, M2	0.88	
Calcium			541	D1	600	D1	571	D1	662	D1	582	D1	614	D1	580	D1,M3	635	D1	573	D1,M3	642	D1, M3	620	D1
Chloride			98.2	D	208	D	199	D	185	D	303	D	221		216	D,J+	92.7	D2	320	D	764	D, M2, J-	275	D
Fluoride	4.0 mg/L	MCL	ND	U	<0.20		<0.20		<0.20		<0.20		<0.20	U	<0.20	U,M1,UR	<0.20	V1, U	<0.20	U	<0.20	M2, Y5, U, J-	<0.20	U
Sulfate			1490	D	2820	D	1800	D	2010	D	2420	D	1710	D, J	1970	D	4710		1950	D,J	4520	D, M2	1790	D
pH (Field Measurement)			6.44		6.71		5.95		6.38		6.19		6.20		4.76		6.47		6.24		6.30		6.32	
Total Dissolved Solids			3290		3460		3770		3790		3830		3480		3580		3650		3680		3320	Y1	3000	
APPENDIX IV CONSTITUENTS																								
Antimony	0.006 mg/L	MCL	ND	U	<0.005		<0.005		<0.005		<0.005		<0.005	U	<0.005	U,M2,V1	<0.005	U	<0.005	U	<0.005	U, JU	<0.005	U
Arsenic	0.0144 mg/L	Background	0.0023		0.0025		0.0029		0.0027		0.0026		0.0026		0.0026	M2	0.0050		0.0028		0.0030	M1, J+	0.0026	
Barium	2.0 mg/L	MCL	0.010		0.011		0.011		0.011		0.010		0.011		0.01	M2	0.011		0.011		0.011		0.010	
Beryllium	0.004 mg/L	MCL	ND	U	<0.0020		<0.0020		<0.0020		<0.0020		<0.0020	U	<0.0020	U,M2,V1	<0.002	U	<0.0020	U	<0.0040	D2, U, UJ	<0.0020	U
Cadmium	0.005 mg/L	MCL	ND	U	<0.0010		<0.0010		<0.0010		<0.0010		<0.0010	U	<0.0010	U,M2	<0.001	U	<0.0010	U	<0.0010	U	<0.0010	U
Chromium	0.1 mg/L	MCL	ND	U	<0.0020		<0.0020		0.0010	B, J	<0.0020		<0.0020	U	<0.0020	U,M2	<0.002	U	<0.0020	U	<0.0020	U	<0.0020	U
Cobalt	0.009 mg/L	Background	0.008		0.008		0.010		0.008		0.008		0.007		0.008	M2	0.007		0.005		0.006	J-	0.005	
Fluoride	4.0 mg/L	MCL	ND	U	<0.20		<0.20		<0.20		<0.20		<0.20	U	<0.20	U,M1,UR	<0.20	V1, U	<0.20	U	<0.20	M2, Y5, U,J-	<0.20	U
Lead	0.015 mg/L	CCR Rule Value	ND	U	<0.002		<0.002		<0.002		<0.002		<0.002	U	<0.002	U,M2	<0.002	U	<0.002	U	<0.002	U	<0.002	U
Lithium	0.040 mg/L	CCR Rule Value	0.03		0.03		0.03		0.03		0.03		0.03		0.03	M2	0.03		0.04		0.04	D2, J-	0.04	
Mercury	0.002 mg/L	MCL	ND	U	<0.0005		<0.0005		<0.0005		<0.0005		<0.0005	U	<0.0005	U,M2, UJ	<0.000005	U	<0.000005	UJ	<0.000005	U, UJ	<0.000005	
Molybdenum	0.1 mg/L	CCR Rule Value	0.004	J	0.004	J	0.004	J	0.003	J	0.004	J	0.003	J	0.004	M2,J	0.003	J	0.004	J	0.004	J	0.005	J
Radium 226	5.0 pCi/L	MCL	0.434		1.22		1.70		1.29		1.62		0.900	J	1.38	J	1.04	J	1.93	J	1.37	J	1.79	
Radium 228																								
Selenium	0.05 mg/L	MCL	ND	U	<0.003		<0.003		<0.003		<0.003		<0.003	U	<0.003	U,M2	<0.003	U	<0.003	U	<0.003	U	<0.003	U
Thallium	0.002 mg/L	MCL	ND	U	<0.0020		<0.0020		<0.0020		<0.0020		<0.0020	U	<0.0020	U,M2	<0.002	U	<0.0020	U	<0.0020	U	<0.0020	U

*All results listed in milligrams per liter (mg/L) unless otherwise noted by the Groundwater Protection Standard (GWPS).

B = Compound was found in the blank and sample.

CCR = coal combustion residuals

D = Results reported from dilution.

D1 = Sample required dilution due to high concentration of target analyte.

D2 = Sample required dilution due to matrix interference.

J = Result is less than the Reporting Limit but greater than or equal to the Method Detection Limit and the concentration is an approximate value.

J+ = Qualified as estimated potential high bias during data review.

M1 = Matrix spike recovery was high; the method control sample recovery was acceptable.

M2 = Matrix spike recovery was low; the method control sample recovery was acceptable.

M3 = The accuracy of the spike recovery value is reduced since the analyte concentration in the sample is disproportionate to spike level. The method control sample recovery was acceptable.

MCL = maximum contaminant level

ND = not detected at or above method detection limit.

pCi/L = picocuries per liter

U = Target analyte was analyzed for, but was below detection limit.

UJ = Non-detect result was qualified as estimated at the reporting limit during data review.

UR = Non-detect result was rejected during data review.

V1 = Continuing calibration verification (CCV) recovery was above method acceptable limits. This target analyte not detected in the sample.

WILSON LANDFILL - GROUNDWATER ANALYTICAL SUMMARY
MW-6

APPENDIX III CONSTITUENTS	GWPS	GWPS Criteria	DATE															
			4/5/2016	5/19/2016	8/25/2016	10/4/2016	2/15/2017	5/18/2017	8/16/2017	9/29/2017	10/12/2017	4/13/2018	7/12/2018	10/4/2018				
			Baseline Events												Assessment	Re-sample	Assessment	
Boron			0.255 JB	0.243 JB	0.27 J	0.228 JB	0.293	0.265 JB	0.298 J	0.328 J	0.286 J		0.250 J	0.272 JB				
Calcium			534	466	470	445	414 B	490 B	477	459	438 B		478 J	426				
Chloride			3.65 B	5.09 B	4.1 B	4.63	4.93	4.37 B	5.49 B	5.36 B	5.6		4.79 B	6.16 B				
Fluoride	4.0 mg/L	MCL	ND J	ND JB	ND	ND	ND J	ND J	ND JB	ND J	2.96		ND J	ND J				
Sulfate			1560	1710	1660 B	1790 B	1610	1570	1840 B	1630 B	1670 B		1730	1590 B				
pH (Field Measurement)			6.40	6.26	6.56	6.64	6.09	6.35	6.36	6.29	6.4	6.15	6.07	6.08				
Total Dissolved Solids			2740	2780	2790	2800	2620	2820	2950	2900	2920		2920	3050				
APPENDIX IV CONSTITUENTS																		
Antimony	0.006 mg/L	MCL	ND	ND J	ND J	ND JB	ND J	ND JB	ND JB	ND JB		ND JB	ND J	NA				
Arsenic	0.0144 mg/L	Background	ND J	0.00736	ND JB	0.00534	0.0123	ND B	0.00598	0.00632		ND J	0.00683	0.00592				
Barium	2.0 mg/L	MCL	ND J	ND J	ND J	ND J	ND J	ND J	ND J	ND J		ND J	ND J	NA				
Beryllium	0.004 mg/L	MCL	ND	ND	ND	ND J	ND	ND	ND	ND		ND	NA	NA				
Cadmium	0.005 mg/L	MCL	ND	ND	ND	ND	ND	ND	ND	ND		ND	NA	NA				
Chromium	0.1 mg/L	MCL	ND	ND J	ND B	ND	ND	ND	ND	ND J		ND J	ND	NA				
Cobalt	0.009 mg/L	Background	0.00728 J	0.00713	0.0074	0.00688	0.0054	0.0059	0.00578	0.00686		0.00742	0.00672	0.00666				
Fluoride	4.0 mg/L	MCL	ND J	ND J	ND	ND	ND J	ND J	ND JB	ND J		ND J	ND J	ND J				
Lead	0.015 mg/L	CCR Rule Value	ND	ND J	ND J	ND JB	ND J	ND J	ND J	ND J		ND J	ND J	NA				
Lithium	0.040 mg/L	CCR Rule Value	0.0326 J	0.0419 J	0.0494 J	0.0459 J	0.0508	0.0455 J	0.0495 J	0.0472 J		0.0470 J	0.0496 J	0.0463 J				
Mercury	0.002 mg/L	MCL	ND	ND	ND	ND	ND	ND	ND	0.000161 J F1		ND	NA	NA				
Molybdenum	0.1 mg/L	CCR Rule Value	ND J	ND J	ND J	ND J	ND J	ND J	ND J	ND J		ND J	ND J	ND J				
Radium 226	5.0 pCi/L	MCL	0.596	0.581	0.519	0.847	0.919	0.892	0.82	0.639		0.900	0.795	1.44				
Radium 228																		
Selenium	0.05 mg/L	MCL	ND	ND	ND	ND J	ND	ND	ND	ND		ND	ND	NA				
Thallium	0.002 mg/L	MCL	ND	ND J	ND J	ND J	ND	ND	ND	ND J		ND J	ND	NA				

*All results listed in milligrams per liter (mg/L) unless otherwise noted by the Groundwater Protection Standard (GWPS).
B = compound was found in the blank and sample.
CCR = coal combustion residuals
J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
MCL = maximum contaminant level
NA = not analyzed
ND = not detected at or above method detection limit.
pCi/L = picocuries per liter

WILSON LANDFILL - GROUNDWATER ANALYTICAL SUMMARY (continued)
MW-6

APPENDIX III CONSTITUENTS	GWPS	GWPS Criteria																								
			6/30/2019		11/6/2019		4/22/2020		10/13/2020		5/13/2021		9/30/2021		4/27/2022		9/26/2022		4/25/2023		10/3/2023		4/16/2024		9/30/2024	
			Assessment																							
Boron			ND	D2 U	ND	D2 U	0.31		0.34		0.43		0.51		0.52	M2	0.58		0.87		0.71		1.37	D1	1.00	D1, M2
Calcium			433	D1	482	D1	511	D1	483	D1	568	D1	473	D1	484	D1, M2	505	D1	461	D1	504	D1	525	D1	475	D1, M3
Chloride			8.2		16.3		10.2		18.9		16.4		33.0	D	16.5		24.4	D	10.9	D2, J	33.7		56.5		46.3	
Fluoride	4.0 mg/L	MCL	ND	U	ND	U	0.21		<0.20		0.20		<0.20		<0.20	U	<0.20	U	<0.20	V1, U	<0.20	U	0.23		0.21	
Sulfate			2040	D	1280	D	2370	D1	1750	D	1730	D	2200	D	1470	D	1710	D	432	D2, J	3140	D	4420	D	1500	D
pH (Field Measurement)			6.39		6.29		6.21		6.72		7.22		6.13		6.44		4.76		6.45		6.31		6.67		6.56	
Total Dissolved Solids			2700		3170		2750		3030		3020		3120		2790		2920		2300		2820		2520		2640	
APPENDIX IV CONSTITUENTS																										
Antimony	0.006 mg/L	MCL	ND	U	ND	U	<0.005		<0.005		<0.005		<0.005		<0.005	U	<0.005	U	<0.005	U	<0.005	U	<0.005	U	<0.005	U
Arsenic	0.0144 mg/L	Background	0.0046		0.0060		0.0050		0.0054		0.0047		0.0051		0.0046		0.0049		0.0050		0.0054		0.0052		0.0049	
Barium	2.0 mg/L	MCL	0.010		0.012		0.012		0.013		0.012		0.012		0.011		0.012		0.012		0.014		0.011		0.011	
Beryllium	0.004 mg/L	MCL	ND	U	ND	U	<0.0020		<0.0020		<0.0020		<0.0020		<0.0020	U	<0.0020	U	<0.002	U	<0.0020	U	<0.0020	D2, U	<0.0020	U
Cadmium	0.005 mg/L	MCL	ND	U	ND	U	<0.0010		<0.0010		<0.0010		<0.0010		<0.0010	U	<0.0010	U	<0.001	U	<0.0010	U	<0.0010	U	<0.0010	U
Chromium	0.1 mg/L	MCL	ND	U	ND	U	<0.0020		0.0007	J	0.0007	B, J	<0.0020		<0.0020	U	<0.0020	U	0.0008	J	<0.0020	U	<0.0020	U	<0.0020	U
Cobalt	0.009 mg/L	Background	0.008		0.008		0.009		0.009		0.008		0.008		0.008		0.008		0.007		0.007		0.006		0.007	
Fluoride	4.0 mg/L	MCL	ND	U	ND	U	0.21		<0.20		0.20		<0.20		<0.20	U	<0.20	U	<0.20	V1, U	<0.20	U	0.23		0.21	
Lead	0.015 mg/L	CCR Rule Value	ND	U	0.0005	J	0.0005	J	0.0006	J	<0.002		<0.002		<0.002	U	<0.002	U	<0.002	U	<0.002	U	<0.002	U	<0.002	U
Lithium	0.040 mg/L	CCR Rule Value	0.04		0.04		0.04		0.04		0.04		0.05		0.04	J-	0.04		0.04		0.04		0.05	D2	0.04	
Mercury	0.002 mg/L	MCL	ND	U	ND	U	<0.0005		<0.0005		<0.0005		<0.0005		<0.0005	U	<0.0005	U	<0.000005	U	<0.000005	U	<0.000005	U	<0.000005	U, M2
Molybdenum	0.1 mg/L	CCR Rule Value	0.006	J	0.007	J	0.006	J	0.007	J	0.006	J	0.007	J	0.006	J	0.007	J	0.006	J	0.007	J	0.008	J	0.007	J
Radium 226	5.0 pCi/L	MCL	0.8		1.42		0.804		0.568		0.758		0.610		1.49		0.84	J	1.64	J	1.98	J	0.95	J	0.853	
Radium 228																										
Selenium	0.05 mg/L	MCL	ND	U	ND	U	<0.003		<0.003		<0.003		<0.003		<0.003	U	<0.003	U	<0.003	U	<0.003	U	<0.003	U	<0.003	U
Thallium	0.002 mg/L	MCL	ND	U	ND	U	<0.0020		<0.0020		<0.0020		<0.0020		<0.0020	U	<0.0020	U	<0.002	U	<0.0020	U	<0.0020	U	<0.0020	U

*All results listed in milligrams per liter (mg/L) unless otherwise noted by the Groundwater Protection Standard (GWPS).
B = Compound was found in the blank and sample.
CCR = coal combustion residuals
D = Results reported from dilution.
D1 = Sample required dilution due to high concentration of target analyte.
D2 = Sample required dilution due to matrix interference.
J- = Qualified as estimated potential low bias during data review.
J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
MCL = maximum contaminant level
NA = not analyzed
ND = Not detected at or above method detection limit.
pCi/L = picocuries per liter
U = Target analyte was analyzed for, but was below detection limit.
V1 = Continuing calibration verification (CCV) recovery was above method acceptable limits. This target analyte not detected in the sample.

WILSON LANDFILL - GROUNDWATER ANALYTICAL SUMMARY
MW-7

APPENDIX III CONSTITUENTS	GWPS	GWPS Criteria	DATE																							
			4/4/2016		5/19/2016		8/25/2016		10/6/2016		2/15/2017		5/18/2017		8/16/2017		9/29/2017		10/12/2017		4/13/2018		7/12/2018		10/4/2018	
			Baseline Events															Assessment		Re-sample		Assesmmnt				
Boron			0.241	JB	0.165	JB	0.277	J	0.203	JB	0.293	J	0.232	JB	0.263	J	0.28	J	0.245	J			0.324	J	0.395	JB
Calcium			364		241		287		251		262	B	273	B	268		269		259	B			297		271	
Chloride			3.47	B	5.31	B	5.67	B	5.65	B	6.15		6.91	B	7.91	B	7.54	B	7.77				17.1	B	21.9	B
Fluoride	4.0 mg/L	MCL	ND	J	ND	J	ND	J	ND	J	ND	J	ND	J	ND	JB	ND	J	1.43				ND	J	ND	J
Sulfate			759		784		813	B	822		850		877		940	B	1780	B	910	B			837		888	B
pH (Field Measurement)			6.53		6.29		6.60		7.33		5.60		6.55		6.49		6.32		6.50		6.26		6.18		6.23	
Total Dissolved Solids			1450		1450		1520		1560		1540		1550		1600		1590		1610				1720		1750	
APPENDIX IV CONSTIUENTS																										
Antimony	0.006 mg/L	MCL	ND		ND		ND	J	ND	JB	ND		ND	JB	ND	JB					ND	JB	ND	J	NA	
Arsenic	0.0144 mg/L	Background	ND		ND	J	ND	JB	ND	J	ND	J	ND	JB	ND	J	ND	J			ND	J	ND	J	ND	J
Barium	2.0 mg/L	MCL	ND	J	ND	J	ND	J	ND	J	ND	J	ND	J	ND	J	ND	J			ND	J	ND	J	NA	
Beryllium	0.004 mg/L	MCL	ND		ND		ND		ND		ND		ND		ND		ND				ND		NA		NA	
Cadmium	0.005 mg/L	MCL	ND		ND		ND		ND		ND		ND		ND		ND				ND		NA		NA	
Chromium	0.1 mg/L	MCL	ND		ND	J	0.00304	B	ND		ND		ND		ND		ND				ND	J	ND		NA	
Cobalt	0.009 mg/L	Background	0.0084	J	0.0058		0.0062		0.00483	J	0.00531		0.00358	J	0.00395	J	0.00454	J			0.00468	J	0.00365	J	0.00346	J
Fluoride	4.0 mg/L	MCL	ND	J	ND	J	ND	J	ND	J	ND	J	ND	J	ND	JB	ND	J			ND	J	ND	J	ND	J
Lead	0.015 mg/L	CCR Rule Value	ND		ND		ND		ND	J	ND		ND		ND		ND				ND		ND	J	NA	
Lithium	0.040 mg/L	CCR Rule Value	0.0241	J	0.0241	J	0.0305	J	0.0263	J	0.0318	J	0.0277	J	0.0291	J	0.0278				0.0261	J	0.0271	J	0.0273	J
Mercury	0.002 mg/L	MCL	ND		ND		ND		ND		ND		ND		ND		ND				ND		NA		NA	
Molybdenum	0.1 mg/L	CCR Rule Value	ND	J	ND	J	ND	J	ND	J	ND	J	ND	J	ND	J	ND	J			ND	J	ND	J	ND	J
Radium 226	5.0 pCi/L	MCL	0.727		0.558		0.613		0.66		ND		0.817		0.852		0.779				0.572		0.697		0.935	
Radium 228																										
Selenium	0.05 mg/L	MCL	ND		ND		ND		ND		ND		ND		ND		ND				ND		ND		NA	
Thallium	0.002 mg/L	MCL	ND		ND		ND		ND		ND		ND		ND		ND				ND		ND		NA	

*All results listed in milligrams per liter (mg/L) unless otherwise noted by the Groundwater Protection Standard (GWPS).
B = Compound was found in the blank and sample.
CCR = coal combustion residuals
D = Results reported from dilution.
D1 = Sample required dilution due to high concentration of target analyte.
D2 = Sample required dilution due to matrix interference.
J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
MCL = maximum contaminant level
NA = not analyzed
ND = not detected at or above method detection limit.
U = Target analyte was analyzed for, but was below detection limit.

WILSON LANDFILL - GROUNDWATER ANALYTICAL SUMMARY (continued)
MW-7

APPENDIX III CONSTITUENTS	GWPS	GWPS Criteria																								
			6/27/2019	11/7/2019		4/22/2020		10/13/2020		5/13/2021		9/30/2021		4/27/2022		9/27/2022		4/25/2023		10/3/2023		4/16/2024		10/1/2024		
			Assessment																							
Boron			1.75	B	1.41	D2	1.58	D1	2.26	D1	2.71	D1	2.37	D1	3.05	D1	2.93	D1	2.85	D1	3.01	D1	5.23	D1	3.33	D1
Calcium			329		331	D1	369	D1	350	D1	475	D1	383	D1	420	D1	449	D1	464	D1	343	D1	453	D1	405	D1
Chloride			32.0		30.1		40.0		45.0	D	90.7	D	96.1	D	120	D	17.4	D	94.5		76		389	D	104	
Fluoride	4.0 mg/L	MCL	0.222		0.21		0.27		0.22		0.28		0.26		0.22		<1.00	U	0.25		0.23		0.25		0.25	
Sulfate			1030		809	D	1310	D1	1050	D	885	D	2420	D	1950	D	1350	D1	2300	D, M3	1630	D	3400	D	1070	D
pH (Field Measurement)			6.66		6.59		6.90		6.02		6.52		6.30		6.47		6.58		6.55		6.3		6.79		6.48	
Total Dissolved Solids			1820		1890		1910		1950		2240		2230		2310		2290		2540		2230		1760	H2, J	2260	
APPENDIX IV CONSTIUENTS																										
Antimony	0.006 mg/L	MCL	0.000242	JB	ND	U	<0.005		<0.005		<0.005		<0.005		<0.005	U	<0.005	U	<0.005	U	<0.005	U	<0.005	U	<0.005	U
Arsenic	0.0144 mg/L	Background	0.00423	J	0.0034		0.0075		0.0036		0.0039		0.0041		0.0040		0.0034		0.0037		0.004		0.0036		0.0040	
Barium	2.0 mg/L	MCL	0.0164	JB	0.013		0.025		0.013		0.014		0.013		0.013		0.012		0.012		0.016		0.014		0.012	
Beryllium	0.004 mg/L	MCL	ND		ND	U	<0.0020		<0.0020		<0.0020		<0.0020		<0.0020	U	<0.0020	U	<0.002	U	<0.0020	U	<0.0020	U	<0.0020	U
Cadmium	0.005 mg/L	MCL	ND		ND	U	<0.0010		<0.0010		<0.0010		<0.0010		<0.0010		<0.0010	U	<0.001	U	<0.0010	U	<0.0010	U	<0.0010	U
Chromium	0.1 mg/L	MCL	0.0247	B	ND	U	0.0053		<0.0020		0.0008	B, J	0.0007	J	0.0006	J	<0.0020	U	0.0013	J	0.0011	J	<0.0020	U	<0.0020	U
Cobalt	0.009 mg/L	Background	0.00236	JB	ND	U	0.006		<0.004		<0.004		<0.004		<0.004	U	<0.004	U	<0.004	U	<0.004	U	<0.004	U	<0.004	U
Fluoride	4.0 mg/L	MCL	0.222		0.21		0.27		0.22		0.28		0.26		0.22		<1.00	U	0.25		0.23		0.25		0.25	
Lead	0.015 mg/L	CCR Rule Value	0.000348	J	ND	U	0.004		<0.002		<0.002		<0.002		<0.002	U	<0.002	U	<0.002	U	<0.002	U	<0.002	U	<0.002	U
Lithium	0.040 mg/L	CCR Rule Value	0.0323	J	0.02		0.03		0.03		0.03		0.03		0.19		0.03		0.02		0.03		0.04	D2	0.03	
Mercury	0.002 mg/L	MCL	ND		ND	U	<0.0005		<0.0005		<0.0005		<0.0005		<0.0005	U	<0.0005	U	<0.000005	U	<0.000005	U	<0.000005	U	<0.000005	U
Molybdenum	0.1 mg/L	CCR Rule Value	0.0142		0.006	J	0.003	J	0.005	J	0.005	J	0.006	J	0.006	J	0.006	J	0.006	J	0.005	J	0.006	J	0.005	J
Radium 226	5.0 pCi/L	MCL	0.597		0.864		1.05		0.967		0.224		1.23		0.605	J	2.16	J	0.924	J	0.593	J	1.08	J	0.570	
Radium 228																										
Selenium	0.05 mg/L	MCL	0.000427	J	ND	U	<0.003		<0.003		<0.003		<0.003		<0.003	U	<0.003	U	<0.003	U	<0.003	U	<0.003	U	<0.003	U
Thallium	0.002 mg/L	MCL	ND		ND	U	<0.0020		<0.0020		<0.0020		<0.0020		<0.0020	U	<0.0020	U	<0.002	U	<0.0020	U	<0.0020	U	<0.0020	U

*All results listed in milligrams per liter (mg/L) unless otherwise noted by the Groundwater Protection Standard (GWPS).
**Monitoring Well MW-7 Radium 226/228 sample collected 9/27/2022 was lost by laboratory and was resampled on 11/1/2022.
B = Compound was found in the blank and sample.
CCR = coal combustion residuals
D = Results reported from dilution.
D1 = Sample required dilution due to high concentration of target analyte.
D2 = Sample required dilution due to matrix interference.
J = Result is less than the reporting limit but greater than or equal to the method Detection limit and the concentration is an approximate value.
MCL = maximum contaminant level
NA = not analyzed
ND = not detected at or above method detection limit.
pCi/L = picocuries per liter
U = Target analyte was analyzed for, but was below detection limit.

WILSON LANDFILL - GROUNDWATER ANALYTICAL SUMMARY
MW-8

APPENDIX III CONSTITUENTS	GWPS	GWPS Criteria	DATE																							
			4/4/2016		5/19/2016		8/25/2016		10/3/2016		2/15/2017		5/17/2017		8/15/2017		9/28/2017		10/12/2017		4/13/2018		7/12/2018		10/3/2018	
			Baseline Events										Assessment		Re-sample		Assessment									
Boron			ND	JB	ND	JB	ND	J	ND	JB	ND	J	ND	JB	ND	J	ND	J			ND	J	0.0388	JB		
Calcium			329		242		237		226		213	B	225	B	230		214		216	B			245		207	
Chloride			4.12	B	5.48	B	4.38	B	4.69		4.7		4.19	B	4.68	B	4.82	B	4.44				3.83	B	4.80	B
Fluoride	4.0 mg/L	MCL	ND	J	ND	J	ND	J	ND	JB	ND	J	ND	J	ND	JB	ND	J	1.210				ND	J	ND	J
Sulfate			876		910		872	B	854	B	779	B	877		964	B	900	B	894	B			887		799	B
pH (Field Measurement)			6.47		6.34		6.64		6.63		4.91		6.47		6.44		6.35		6.50		6.28		6.08		6.25	
Total Dissolved Solids			1530		1590		1550		1520		1450		1560		1590		1520		1560				1690		1560	
APPENDIX IV CONSTITUENTS																										
Antimony	0.006 mg/L	MCL	ND		ND		ND	J	ND	JB	ND		ND	JB	ND	JB	ND	J			ND	JB	ND	J	NA	
Arsenic	0.0144 mg/L	Background	0.00931	J	0.00698		0.00709	B	0.00581		0.00799		0.0072	B	0.00548		0.00515				0.00525		0.00558		0.00757	
Barium	2.0 mg/L	MCL	ND	J	ND	J	ND	J	ND	J	ND	J	ND	J	ND	J	ND	J			ND	J	ND	J	NA	
Beryllium	0.004 mg/L	MCL	ND		ND		ND		ND		ND		ND		ND		ND				ND		NA		NA	
Cadmium	0.005 mg/L	MCL	ND		ND		ND		ND		ND		ND		ND		ND				ND		NA		NA	
Chromium	0.1 mg/L	MCL	ND		ND	J	ND	JB	ND		ND		ND		ND		ND				ND	J	ND	J	NA	
Cobalt	0.009 mg/L	Background	ND		0.00156	J	0.00118	J	0.0015	J	0.0011	J	0.000739	J	0.000943	J	0.00102	J			0.000800	J	0.00113	J	0.000849	J
Fluoride	4.0 mg/L	MCL	ND	J	ND	J	ND	J	ND	JB	ND	J	ND	J	ND	JB	ND	J			ND	J	ND	J	ND	J
Lead	0.015 mg/L	CCR Rule Value	ND		ND		ND		ND		ND		ND		ND		ND				ND		ND	J	NA	
Lithium	0.040 mg/L	CCR Rule Value	ND		ND		0.0116	J	0.012	J	0.0142	J	0.0103	J	0.0137	J	ND				ND		0.0125	J	0.0129	J
Mercury	0.002 mg/L	MCL	ND		ND		ND		ND		ND		ND		ND		ND				ND		NA		NA	
Molybdenum	0.1 mg/L	CCR Rule Value	0.0187	J	0.0142		0.0145		0.0151		0.0185		0.0137		0.0166		0.0153				0.0123		0.0129		0.0137	
Radium 226	5.0 pCi/L	MCL	1.12		1.31		0.741		1.12		0.854		1.07		1.04		0.901				0.802		1.29		1.69	
Radium 228																										
Selenium	0.05 mg/L	MCL	ND		ND		ND		ND		ND		ND	J	ND						ND		ND	J	NA	
Thallium	0.002 mg/L	MCL	ND		ND		ND		ND		ND		ND		ND		ND				ND		ND		NA	

*All results listed in milligrams per liter (mg/L) unless otherwise noted by the Groundwater Protection Standard (GWPS).
B = Compound was found in the blank and sample.
CCR = coal combustion residuals
J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
MCL = maximum contaminant level
NA = not analyzed
ND = not detected at or above method detection limit.

WILSON LANDFILL - GROUNDWATER ANALYTICAL SUMMARY (continued)
MW-8

APPENDIX III CONSTITUENTS	GWPS	GWPS Criteria	Assessment																							
			6/30/2019		11/5/2019		4/22/2020		10/13/2020		5/13/2021		9/30/2021		4/27/2022		9/26/2022		4/26/2023		10/2/2023		4/16/2024		9/30/2024	
Boron			ND	D2,U	ND	D2,M2,U	<0.10		<0.10		<0.10		<0.10		<0.10	U	<0.10	U	<0.10	U	<1.00	D1, U	<0.10	U	<0.10	U
Calcium			248	D1	240	D1 M3	255	D1	249	D1	349	D1	231	D1	239	D1	228	D1	218	D1	214	D1	218	D1	220	D1
Chloride			4.1		4.7		3.6		3.7		3.8		3.9	M2	3.7		3.7	H2	4.2	D2	3.7		5		4.0	
Fluoride	4.0 mg/L	MCL	0.2		0.27		0.27		0.23		0.30		0.28	M2	0.25		<1.00	D,U	<2.00	D2,V1,U	0.25		0.29		0.27	
Sulfate			920	D	1480	D	1010	D	992	D	980	D	2180	D,M2,Y2	1330	D	935	D1	721	D2, J-	1140	D	1800	D	711	D
pH (Field Measurement)			6.30		6.30		6.18		6.55		6.84		6.35		6.28		4.67		6.41		6.63		6.3		6.66	
Total Dissolved Solids			1640		1570		1500		1680		1750		1630		1470		1420		1110		1640		1270		1440	
APPENDIX IV CONSTITUENTS																										
Antimony	0.006 mg/L	MCL	ND	U	ND	U	<0.005		<0.005		<0.005		<0.005		<0.005	U	<0.005	U	<0.005	U	<0.005	U	<0.005	U	<0.005	U
Arsenic	0.0144 mg/L	Background	0.0054		0.0056		0.0056		0.0144		0.0052		0.0053		0.0102		0.0053		0.0047		0.0056		0.0039		0.0060	
Barium	2.0 mg/L	MCL	0.024		0.022		0.024		0.070		0.023		0.023		0.050		0.022		0.018		0.021		0.014		0.022	
Beryllium	0.004 mg/L	MCL	ND	U	ND	M2,U	<0.0020		<0.0020		<0.0020		<0.0020		0.0020	U	<0.0020	U	<0.002	U	<0.0020	U	<0.0020	U	<0.0020	U
Cadmium	0.005 mg/L	MCL	ND	U	ND	U	<0.0010		0.0004	J	<0.0010		<0.0010		0.0003	J	<0.0010	U	<0.001	U	<0.0010	U	<0.0010	U	<0.0010	U
Chromium	0.1 mg/L	MCL	ND	U	0.0009	J	0.0008	J	0.0224		0.0011	B, J	0.0018	J	0.0155		0.0015	J	0.0008	J	0.0016	J	0.0008	J	0.0031	
Cobalt	0.009 mg/L	Background	ND	U	ND	U	<0.004		0.015		<0.004		<0.004		0.009		<0.004	U	<0.004	U	<0.004	U	<0.004	U	<0.004	U
Fluoride	4.0 mg/L	MCL	0.2		0.27		0.27		0.23		0.30		0.28	M2	0.25		<1.00	D,U	<2.00	D2,V1,U	0.25		0.29		0.27	
Lead	0.015 mg/L	CCR Rule Value	ND	U	0.0005	J	<0.002		0.012		<0.002		0.0008	J	0.007		0.0007	J	<0.002	U	0.0006	J	<0.002	U	0.001	J
Lithium	0.040 mg/L	CCR Rule Value	0.009	J	0.009	J	0.009	J	0.02		0.008	J	0.01	V1,J	0.02		0.01	J	0.008	J	0.009	J	0.01	D2, J	0.009	J
Mercury	0.002 mg/L	MCL	ND	U	ND	U	<0.0005		<0.0005		<0.0005		<0.0005		<0.0005	U	<0.0005	U	<0.000005	U	<0.000005	U	<0.000005	U	3.8	J
Molybdenum	0.1 mg/L	CCR Rule Value	0.01		0.01		0.01		0.01		0.01		0.01		0.01		0.01		0.01		0.01		0.01		0.01	
Radium 226	5.0 pCi/L	MCL	2.8		0.946		1.07		2.94		0.968		0.859		1.52		1.67	J	1.66	J	1.08	J	1.18	J	0.300	
Radium 228																										
Selenium	0.05 mg/L	MCL	ND	U	ND	U	<0.003		<0.003		<0.003		<0.003		<0.003	U	<0.003	U	<0.003	U	<0.003	U	<0.003	U	<0.003	U
Thallium	0.002 mg/L	MCL	ND	U	0.0001	J	<0.0020		<0.0020		<0.0020		<0.0020		0.0001	J	<0.0020	U	<0.002	U	<0.0020	U	<0.0020	U	<0.0020	U

*All results listed in milligrams per liter (mg/L) unless otherwise noted by the Groundwater Protection Standard (GWPS).

B = Compound was found in the blank and sample.

CCR = Coal combustion residuals

D = Results reported from dilution.

D1 = Sample required dilution due to high concentration of target analyte.

D2 = Sample required dilution due to matrix interference.

H2 = Initial analysis within holding time. Reanalysis was past holding time.

J- = Qualified as estimated potential low bias during data review.

J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.

M2 = Matrix spike recovery was low; the method control sample recovery was acceptable.

M3 = The accuracy of the spike recovery value is reduced since the analyte concentration in the sample is disproportionate to spike level. The method control sample recovery was acceptable.

MCL = maximum contaminant level

NA = not analyzed

ND = Not detected at or above method detection limit.

pCi/L = picocuries per liter

U = Target analyte was analyzed for, but was below detection limit.

V1 = Continuing calibration verification (CCV) recovery was above method acceptable limits. This target analyte not detected in the sample.

WILSON LANDFILL - GROUNDWATER ANALYTICAL SUMMARY
MW-10

APPENDIX III CONSTITUENTS	GWPS	GWPS Criteria	DATE														
			4/5/2016	5/18/2016	8/25/2016	10/6/2016	2/17/2017	5/18/2017	8/18/2017	10/2/2017	10/13/2017	4/14/2018	7/13/2018	10/5/2018			
			Baseline Events										Assessment	Re-sample	Assessment		
Boron			0.291 JB	0.217 JB	0.205 J	0.166 JB	0.229 J	0.163 JB	0.196 J	0.181 J	0.251 J			0.144 J	0.286 JB		
Calcium			497	390	404	369	440 B	390 B	368	379 B	347 B			378 J	334		
Chloride			53.7 B	85.7 JB	53	44 B	44 B	47.4 B	43.5 B	63.3	83			48.2 B	59.2 B		
Fluoride	4.0 mg/L	MCL	ND JB	ND J	ND	ND J	ND J	ND J	ND JB	ND J	2.8			ND J	ND J		
Sulfate			2090	2210	2000 B	2030	1980 B	2070	2320 B	2250 B	2080 B			2010	1850 B		
pH (Field Measurement)			6.03	5.82	6.05	6.91	4.62	5.88	5.83	5.84	6.00	5.90		5.68	5.44		
Total Dissolved Solids			2980	3300	3240	3230	3050	3240	3200	3300	3120			3270	3120		
APPENDIX IV CONSTITUENTS																	
Antimony	0.006 mg/L	MCL	ND	ND	ND J	ND JB	ND	ND JB	0.00396 B	ND JB			ND JB	ND J	NA		
Arsenic	0.0144 mg/L	Background	ND J	ND J	ND JB	ND J	ND J	ND JB	ND J	ND JB			ND J	ND J	ND J		
Barium	2.0 mg/L	MCL	ND J	ND J	ND J	ND J	ND J	ND J	ND J	ND J			ND J	ND J	NA		
Beryllium	0.004 mg/L	MCL	ND	ND J	ND	ND	ND	ND	ND	ND			ND	NA	NA		
Cadmium	0.005 mg/L	MCL	ND	ND	ND	ND	ND J	ND J	ND	ND			ND	NA	NA		
Chromium	0.1 mg/L	MCL	ND	ND J	ND JB	ND	ND	ND	ND	ND J			ND J	ND	NA		
Cobalt	0.009 mg/L	Background	0.158	0.113	0.126	0.108	0.0836	0.0602	0.121	0.139			0.0412	0.0704	0.114		
Fluoride	4.0 mg/L	MCL	ND J	ND J	ND	ND J	ND J	ND J	ND JB	ND J			ND J	ND J	ND J		
Lead	0.015 mg/L	CCR Rule Value	ND	ND J	ND J	ND J	ND J	ND	ND	ND J			ND J	ND J	NA		
Lithium	0.040 mg/L	CCR Rule Value	ND	ND	0.0141 J	0.0149 J	0.0133 J	0.0109 J	0.0129 J	0.0124 J			ND	0.0102 J	0.0147 J		
Mercury	0.002 mg/L	MCL	ND	ND	ND	ND	ND	ND	ND	ND			ND	NA	NA		
Molybdenum	0.1 mg/L	CCR Rule Value	ND	ND	ND	ND	ND	ND	ND J	ND			ND	ND	ND		
Radium 226	5.0 pCi/L	MCL	ND	ND	ND	ND	ND	0.384	0.372	0.506			0.721	0.472	0.625		
Radium 228																	
Selenium	0.05 mg/L	MCL	ND	ND	ND	ND	ND	ND	ND J	ND JB			ND	ND	NA		
Thallium	0.002 mg/L	MCL	ND	ND J	ND J	ND	ND	ND	ND J	ND			ND	ND	NA		

*All results listed in milligrams per liter (mg/L) unless otherwise noted by the Groundwater Protection Standard (GWPS).
B = Compound was found in the blank and sample.
CCR = coal combustion residuals
J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
MCL = maximum contaminant level
NA = not analyzed
ND = not detected at or above method detection limit.

WILSON LANDFILL - GROUNDWATER ANALYTICAL SUMMARY (continued)
MW-10

APPENDIX III CONSTITUENTS	GWPS	GWPS Criteria	Assessment																							
			6/30/2019		11/4/2019		4/22/2020		10/13/2020		5/13/2021		10/1/2021		4/27/2022		9/27/2022		4/26/2023		10/3/2023		4/16/2024		9/30/2024	
Boron			ND	D2 U	ND	U D2	0.28		0.39		0.31		0.70		0.43		0.60		0.66		0.47		0.35		0.46	
Calcium			369	D1	409	D1	415	D1	404	D1	401	D1	396	D1	391	D1	483	D1	448	D1	411	D1	410	D1	437	D1
Chloride			80.1	D	143	D	68.6	D	89.2	D	73.2	D	98.8	D	57.9		61.1		16.5	D2	59.2		61.5		62.3	
Fluoride	4.0 mg/L	MCL	ND	U	ND	U	<0.20		<0.20		<0.20		<0.20		<0.20	U	<0.20	U	<0.2	U	<0.20	U	<0.20	U	<0.20	U
Sulfate			2440	D	553	D	3580	D	1380	D	1240	D	1360	D	1420	D	2660	D1	536	D2	4180	D	2090	A-01,D	1960	D
pH (Field Measurement)			6.01		5.53		6.26		6.16		6.59		5.84		6.25		6.1		5.98		5.71		5.89		5.92	
Total Dissolved Solids			2980		2960		3170		3290		3300		3310		3160		3220		3100		3180		2540		3210	
APPENDIX IV CONSTIUENTS																										
Antimony	0.006 mg/L	MCL	ND	U	ND	U	<0.005		<0.005		<0.005		<0.005		<0.005	U	<0.005	U,V1	<0.005	U	<0.005	U	<0.005	U	<0.005	U
Arsenic	0.0144 mg/L	Background	0.0009	J	0.0025		0.0011		0.0009	J	0.0013		0.0036		0.0009	J	0.0034		0.0006	J	0.002		0.0013		0.0025	
Barium	2.0 mg/L	MCL	0.009		0.01		0.008		0.010		0.010		0.009		0.004		0.010		0.009		0.009		0.007		0.009	
Beryllium	0.004 mg/L	MCL	ND	U	ND	U	<0.0020		<0.0020		<0.0020		<0.0020		<0.0020	U	<0.0020	U,V1	<0.002	U	<0.0020	U	<0.0020	U	<0.0020	U
Cadmium	0.005 mg/L	MCL	0.0001	J	ND	U	<0.0010		<0.0010		<0.0010		<0.0010		0.0001	J	<0.0010	U	<0.001	U	<0.0010	U	0.0001	J	0.0001	J
Chromium	0.1 mg/L	MCL	ND	U	ND	U	<0.0020		0.0007	J	0.0010	B, J	<0.0020		0.0008	J	0.0006	J	<0.002	U	<0.0020	U	<0.0020	U	0.0006	J
Cobalt	0.009 mg/L	Background	0.110		0.108		0.082		0.078		0.064		0.092		0.022		0.108		0.116		0.064		0.066		0.082	
Fluoride	4.0 mg/L	MCL	ND	U	ND	U	<0.20		<0.20		<0.20		<0.20		<0.20	U	<0.20	U	<0.2	U	<0.20	U	<0.20	U	<0.20	U
Lead	0.015 mg/L	CCR Rule Value	ND	U	ND	U	<0.002		<0.002		<0.002		<0.002		<0.002	U	<0.002	U	<0.002	U	<0.002	U	<0.002	U	<0.002	U
Lithium	0.040 mg/L	CCR Rule Value	0.009	J	ND	U	0.006	J	0.008	J	0.006	J	0.008	J	0.006	J	0.009	V1,J	0.009	J	0.009	J	0.01	D2, J	0.007	J
Mercury	0.002 mg/L	MCL	ND	U	ND	U	<0.0005		<0.0005		<0.0005		<0.0005		<0.0005	U	<0.0005	U	<0.000005	UJ	<0.000005	U	0.0000034	J	4.1	J
Molybdenum	0.1 mg/L	CCR Rule Value	ND	U	0.003	J	<0.01		<0.01		<0.01		<0.01		<0.01	U	<0.01	U	<0.01	U	<0.01	U	<0.01	U	<0.01	U
Radium 226	5.0 pCi/L	MCL	1.2		0.11		0.414		0.944		1.40		0.378		0.924	J	2.5	J	1.2	J	0.915	J+	0.298	J	0.705	
Radium 228																										
Selenium	0.05 mg/L	MCL	ND	U	ND	U	<0.003		<0.003		<0.003		<0.003		<0.003	U	<0.003	U	<0.003	U	<0.003	U	<0.003	U	<0.003	U
Thallium	0.002 mg/L	MCL	ND	U	0.0001	J	<0.0020		<0.0020		<0.0020		<0.0020		<0.0020	U	<0.0020	U	<0.002	U	<0.0020	U	<0.0020	U	<0.0020	U

*All results listed in milligrams per liter (mg/L) unless otherwise noted by the Groundwater Protection Standard (GWPS).
 B = Compound was found in the blank and sample.
 CCR = Coal combustion residuals
 D = Results reported from dilution.
 D1 = Sample required dilution due to high concentration of target analyte.
 D2 = Sample required dilution due to matrix interference.
 J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
 J+ = Qualified as estimated potential high bias during data review.
 MCL = maximum contaminant level
 NA = not analyzed
 ND = Not detected at or above method detection limit.
 pCi/L = picocuries per liter
 U = Target analyte was analyzed for, but was below detection limit.
 V1 = Continuing calibration verification (CCV) recovery was above method acceptable limits. This target analyte not detected in the sample.

WILSON LANDFILL - GROUNDWATER ANALYTICAL SUMMARY
MW-4D

APPENDIX III CONSTITUENTS	GWPS	GWPS Criteria	DATE																							
			11/2/2018	6/28/2019	11/8/2019	4/22/2020	10/13/2020	5/12/2021	9/29/2021	4/27/2022	9/27/2022	4/26/2023	10/2/2023	4/17/2024												
			Characterization																							
Boron			6.60		8.09	D2	9.11	D2	10.2	D1	9.39	D1	9.29	D1	8.69	D1,M1	10.3	D1	11.3	D1	9.48	D1	8.76	D1	7	D1
Calcium			607		635	D1	628	D1	714	D1	659	D1	711	D1	608	D1,M3	678	D1	740	D1	721	D1	968	D1	633	D1
Chloride			676	B	826	D	537	D	1280.0	D	1210	D	819	D	1570	D	1110	D	781	D	289	D2	934	D	1250	D
Fluoride	4.0 mg/L	MCL	ND	J	ND	DU	0.21		0.26		0.23		0.26		0.26		<0.20	U	<0.20	U	<2.00	D2,U	0.22		0.25	
Sulfate			1720	B	1330	D	1100	D	2650	D	1260	D	1670	D	985	D	2260		2380	D1	641	D2	2460	D	4540	D
pH (Field Measurement)			6.05		6.46		6.34		6.31		6.47		6.22		6.28		7.34		6.59		6.46		6.18		6.11	
Total Dissolved Solids			4180		4140		3500		4690		4410		4670		4580	C6	4210		4100		3590		4200		3750	
APPENDIX IV CONSTITUENTS																										
Antimony	0.006 mg/L	MCL	ND	JB	ND	U	ND	U	<0.005		<0.005		<0.005		<0.005		<0.005	U	<0.005	U	<0.005	U	<0.005	U	<0.005	U
Arsenic	0.0144 mg/L	Background	ND	JB	0.0032		0.0032		0.0039		0.0037		0.0031		0.0029		0.003		0.0028		0.0045		0.0033		0.0037	
Barium	2.0 mg/L	MCL	ND	J	0.016		0.016		0.016		0.018		0.016		0.013		0.015		0.015		0.021		0.015		0.013	
Beryllium	0.004 mg/L	MCL	ND	J	ND	U	ND	U	<0.0020		<0.0020		<0.0020		<0.0020		<0.0020	U	<0.0020	U	<0.002	U	<0.0020	U	<0.0040	D2, U
Cadmium	0.005 mg/L	MCL	ND		ND	U	ND	U	<0.0010		<0.0010		<0.0010		<0.0010		<0.0010	U	<0.0010	U	<0.001	U	<0.0010	U	<0.0010	U
Chromium	0.1 mg/L	MCL	0.00591	B	0.0006	J	ND	U	<0.0020		0.0010	J	0.0009	B, J	<0.0020		0.0013	J	<0.0020	U	0.0010	J	<0.0020	U	<0.0020	U
Cobalt	0.009 mg/L	Background	0.0122		0.010		0.015		0.010		0.012		0.009		0.010		0.009		0.011		0.022		0.025		0.058	
Fluoride	4.0 mg/L	MCL	ND	J	ND	DU	0.21		0.26		0.23		0.26		0.26		<0.20	U	<0.20	U	<2.00	D2,U	0.22		0.25	
Lead	0.015 mg/L	CCR Rule Value	ND	J	ND	U	ND	U	<0.002		0.0005	J	<0.002		<0.002		<0.002	U	<0.002	U	0.0006	J	<0.002	U	<0.002	U
Lithium	0.040 mg/L	CCR Rule Value	0.181		0.14		0.14		0.16		0.17		0.16		0.13	M1	0.18		0.17		0.12		0.16		0.15	D2
Mercury	0.002 mg/L	MCL	ND		ND	U	ND	U	<0.0005		<0.0005		<0.0005		<0.0005		<0.0005	U	<0.0005	U	<0.000005	UJ	<0.000005	UJ	0.0000025	J, JU
Molybdenum	0.1 mg/L	CCR Rule Value	0.0185		0.007	J	0.01		0.02		0.01		0.006	J	0.007	J	0.007	J	0.007	J	0.008	J	0.008	J	0.007	J
Radium 226	5.0 pCi/L	MCL	1.58		2.7		1.86		0.851		1.71		1.07		1.05		1.07	J	1.83	J	1.22	J	1.98	J	1.65	J
Radium 228																										
Selenium	0.05 mg/L	MCL	ND	J	0.001	J	0.001	J	0.001	J	<0.003		0.001	J	0.001	J	0.001	J	0.001	J	0.001	J	0.001	J	<0.003	U
Thallium	0.002 mg/L	MCL	ND	J	ND	U	ND	U	<0.0020		<0.0020		<0.0020		<0.0020		<0.0020	U	<0.0020	U	0.0001	J	<0.0020		<0.0020	U

*All results listed in milligrams per liter (mg/L) unless otherwise noted by the Groundwater Protection Standard (GWPS).
B = compound was found in the blank and sample.
CCR = coal combustion residuals
D1 = Sample required dilution due to high concentration of target analyte.
D2 = Sample required dilution due to matrix interference.
J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
MCL = maximum contaminant level
NA = not analyzed
ND = not detected at or above method detection limit.
U = Target analyte was analyzed for, but was below detection limit

WILSON LANDFILL - GROUNDWATER ANALYTICAL SUMMARY (continued)
MW-4D

APPENDIX III CONSTITUENTS	GWPS	GWPS Criteria	DATE														
			10/1/2024														
			Characterization														
Boron			8.05	D1													
Calcium			644	D1													
Chloride			479	D													
Fluoride	4.0 mg/L	MCL	0.25														
Sulfate			1790	D													
pH (Field Measurement)			6.36														
Total Dissolved Solids			3890														
APPENDIX IV CONSTITUENTS																	
Antimony	0.006 mg/L	MCL	<0.005	U													
Arsenic	0.0144 mg/L	Background	0.0044														
Barium	2.0 mg/L	MCL	0.020														
Beryllium	0.004 mg/L	MCL	<0.0020	U													
Cadmium	0.005 mg/L	MCL	<0.0010	U													
Chromium	0.1 mg/L	MCL	0.0013	J													
Cobalt	0.009 mg/L	Background	0.035														
Fluoride	4.0 mg/L	MCL	0.25														
Lead	0.015 mg/L	CCR Rule Value	0.0009	J													
Lithium	0.040 mg/L	CCR Rule Value	0.16														
Mercury	0.002 mg/L	MCL	15.4														
Molybdenum	0.1 mg/L	CCR Rule Value	0.01														
Radium 226	5.0 pCi/L	MCL	1.55														
Radium 228																	
Selenium	0.05 mg/L	MCL	0.001	J													
Thallium	0.002 mg/L	MCL	0.0001	J													

*All results listed in milligrams per liter (mg/L) unless otherwise noted by the Groundwater Protection Standard (GWPS).
CCR = coal combustion residuals
D = Results reported from dilution.
D1 = Sample required dilution due to high concentration of target analyte.
D2 = Sample required dilution due to matrix interference.
J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
M1 = Matrix spike recovery was high; the method control sample recovery was acceptable.
MCL = maximum contaminant level
ND = Not detected at or above method detection limit.
pCi/L = picocuries per liter
U = Target analyte was analyzed for, but was below detection limit.
UJ = Non-detect result was qualified as estimated at the reporting limit during data review.

WILSON LANDFILL - GROUNDWATER ANALYTICAL SUMMARY
MW-102

APPENDIX III CONSTITUENTS	GWPS	GWPS Criteria	DATE																					
			11/2/2018		6/27/2019		11/8/2019		4/22/2020		10/13/2020		5/12/2021		9/29/2021		4/28/2022		9/29/2022		4/25/2023		10/2/2023	
			Characterization																					
Boron			ND	J	0.108	JB	ND	D2,M4,U	<0.10		<0.10		<0.10		<0.10	M1,M2,J+	<0.10	U	<0.10	U	<0.10	U		
Calcium			81.3		80.9		85.1	D2	94.5	D1	86.8	D2	82.8	D	84.1	D1	88.4	M1,D1	97.8	D1	84.9	D1	85.5	D1
Chloride			33.3	B	33.3		35.3		33.1		32.9	D2	39.7	D	36.2	M2	34.2		31.8	H2	14.8	D2	31.2	
Fluoride	4.0 mg/L	MCL	ND	J	0.343		0.36		0.34		0.30		0.33		0.33		0.29		0.29		0.32		0.3	
Sulfate			265	B	279		307	D	259	D	261	D	308	D	433	D,M2	245	D	302	H2	150	D2	405	D
pH (Field Measurement)			6.58		6.7		6.61		6.48		6.33		6.49		6.58		6.59		6.67		6.84		7.42	
Total Dissolved Solids			781		760		728		724		836		734		818		792		1040		808		808	
APPENDIX IV CONSTITUENTS																								
Antimony	0.006 mg/L	MCL	ND	JB	0.000101	JB	ND	U	<0.005		<0.005		<0.005		<0.005		<0.005	U	<0.005	U	<0.005	U	<0.005	U
Arsenic	0.0144 mg/L	Background	ND	JB	0.00414	J	0.0031		0.0047		0.0036		0.0038		0.0042		0.0042		0.0038		0.0037		0.0049	
Barium	2.0 mg/L	MCL	ND	J	0.0596	JB	0.059		0.051		0.058		0.053		0.049		0.047		0.046		0.046		0.051	
Beryllium	0.004 mg/L	MCL	ND		0.000134	J	ND	U	<0.0020		<0.0020		<0.0020		<0.0020		<0.0020	U	<0.0020	U,V1	<0.002	U	<0.0020	U
Cadmium	0.005 mg/L	MCL	ND		ND		ND	U	<0.0010		<0.0010		<0.0010		<0.0010		<0.0010	U	<0.0010	U	<0.001	U	0.0002	J
Chromium	0.1 mg/L	MCL	0.00321	B	0.00140	JB	0.0006	J	<0.0020		<0.0020		0.0011	B,J	<0.0020		<0.002	U	<0.002	U	0.0006	J	0.0024	
Cobalt	0.009 mg/L	Background	0.00263	J	0.00286	JB	ND	U	<0.004		<0.004		<0.004		<0.004		<0.004	U	<0.004	U	<0.004	U	0.004	
Fluoride	4.0 mg/L	MCL	ND	J	0.343		0.36		0.34		0.30		0.33		0.33		0.29		0.29		0.32		0.3	
Lead	0.015 mg/L	CCR Rule Value	ND	J	0.000164	J	ND	U	<0.002		<0.002		<0.002		<0.002		<0.002	U	<0.002	U	<0.002	U	0.002	
Lithium	0.040 mg/L	CCR Rule Value	ND		ND		ND	U	<0.02		<0.02		<0.02		<0.02		<0.02	U	<0.02	U,V1	<0.02	U	<0.02	U
Mercury	0.002 mg/L	MCL	ND		ND		ND	U	<0.0005		<0.0005		<0.0005		<0.0005		<0.0005	U	<0.0005	U	<0.000005	U	<0.000005	U
Molybdenum	0.1 mg/L	CCR Rule Value	0.0111		0.00112	J	0.002	J	<0.01		<0.01		<0.01		<0.01		<0.01	U	<0.01	U	<0.01	U	<0.01	U
Radium 226	5.0 pCi/L	MCL	1.22		0.187	U	0.425		0.084		0.741		0.497		0.899		1.14	J	0.652	J	0.313	J	0.821	J
Radium 228																								
Selenium	0.05 mg/L	MCL	ND		ND		ND	U	<0.003		<0.003		<0.003		<0.003		<0.003	U	<0.003	U	<0.003	U	<0.003	U
Thallium	0.002 mg/L	MCL	ND		ND		ND	U	<0.0020		<0.0020		<0.0020		<0.0020		<0.0020	V1,U	<0.0020	U	<0.002	U	0.0002	J

*All results listed in milligrams per liter (mg/L) unless otherwise noted by the Groundwater Protection Standard (GWPS).
B = Compound was found in the blank and sample.
CCR = coal combustion residuals
D1 = Sample required dilution due to high concentration of target analyte
D2 = Sample required dilution due to matrix interference
J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
MCL = maximum contaminant level
NA = not analyzed
ND = not detected at or above method detection limit.
U = Target analyte was analyzed for, but was below detection limit

WILSON LANDFILL - GROUNDWATER ANALYTICAL SUMMARY (continued)
MW-102

APPENDIX III CONSTITUENTS	GWPS	GWPS Criteria	DATE															
			4/16/2024		9/30/2024													
			Characterization															
Boron			<0.10	U	<0.10	U, M2												
Calcium			93.3	D1	90.2	D1, M3												
Chloride			34.0		31.9													
Fluoride	4.0 mg/L	MCL	0.32		0.32													
Sulfate			836	D	300	D												
pH (Field Measurement)			6.94		6.96													
Total Dissolved Solids			1060		868													
APPENDIX IV CONSTITUENTS																		
Antimony	0.006 mg/L	MCL	<0.005	U	<0.005	U												
Arsenic	0.0144 mg/L	Background	0.0041		0.0041													
Barium	2.0 mg/L	MCL	0.042		0.039													
Beryllium	0.004 mg/L	MCL	<0.0040	U	<0.0020	U												
Cadmium	0.005 mg/L	MCL	0.0003	J	<0.0010	U												
Chromium	0.1 mg/L	MCL	0.0007	J	0.0010	J												
Cobalt	0.009 mg/L	Background	<0.004	U	<0.004	U												
Fluoride	4.0 mg/L	MCL	0.32		0.32													
Lead	0.015 mg/L	CCR Rule Value	0.0007	J	<0.002	U												
Lithium	0.040 mg/L	CCR Rule Value	<0.04	D2, V1, U	<0.02	U												
Mercury	0.002 mg/L	MCL	0.0000024	J	<0.000005	U, V1												
Molybdenum	0.1 mg/L	CCR Rule Value	<0.01	U	<0.01	U												
Radium 226	5.0 pCi/L	MCL	1.260	J	0.811													
Radium 228																		
Selenium	0.05 mg/L	MCL	<0.003	U	<0.003	U												
Thallium	0.002 mg/L	MCL	0.0004	J	<0.0020	U												

*All results listed in milligrams per liter (mg/L) unless otherwise noted by the Groundwater Protection Standard (GWPS).
CCR = coal combustion residuals
D = Results reported from dilution.
D1 = Sample required dilution due to high concentration of target analyte.
D2 = Sample required dilution due to matrix interference.
H2 = Initial analysis within holding time. Reanalysis was past holding time.
J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
J+ =Qualified as estimated potential high bias during data review.
M1 = Matrix spike recovery was high; the method control sample recovery was acceptable.
M2 = Matrix spike recovery was low; the method control sample recovery was acceptable.
MCL = maximum contaminant level
ND = Not detected at or above method detection limit.
pCi/L = picocuries per liter
U = Target analyte was analyzed for, but was below detection limit.
V1 = Continuing calibration verification (CCV) recovery was above method acceptable limits. This target analyte not detected in the sample.

WILSON LANDFILL - GROUNDWATER ANALYTICAL SUMMARY
MW-104

APPENDIX III CONSTITUENTS	GWPS	GWPS Criteria	DATE																					
			11/2/2018		6/27/2019		11/8/2019		4/22/2020		10/13/2020		5/12/2021		9/29/2021		4/28/2022		9/30/2022		4/25/2023		10/2/2023	
			Characterization																					
Boron			ND	J	0.0765	JB	ND	U D2	<0.10		<0.10		<0.10		<0.10	U	<0.10	M2,U	<0.10	U	<0.10	M2,U		
Calcium			227		221		257	D1	258	D1	267	D1	273	D	271	D1	312	D1	426	D1,M3	319	D1	296	D1,M3
Chloride			11.8	B	12.7		13.2		13.0		11.4		13.5		12.1		12.2		10.8		10.7		11.2	M2,J-
Fluoride	4.0 mg/L	MCL	ND	J	0.129	J	ND	U	<0.20		<0.20		<0.20		<0.20	U	<0.20	U	<0.20	U	<0.20	U	<0.20	M2,UJ
Sulfate			639	JB	513		587	D M1	662	D	628	D	690	D	1290	D	630	U	1070		1710	D	1080	D, M3
pH (Field Measurement)			6.43		6.87		6.64		6.50		6.41		6.44		6.51		6.24		6.77		6.81		8.55	
Total Dissolved Solids			1410		1360		1490		1380		1590		1460		1610		1550		1640		1620		1760	
APPENDIX IV CONSTITUENTS																								
Antimony	0.006 mg/L	MCL	ND	JB	0.000173	JB	ND	U	<0.005		<0.005		<0.005		<0.005	U	<0.005	UJ	<0.005	U	<0.005	M2, U		
Arsenic	0.0144 mg/L	Background	ND	JB	0.00174	J	0.0027		0.0010		0.0006	J	0.0005	J	0.0007	J	0.0004	J	0.0006	M2, J	0.0010		0.0027	
Barium	2.0 mg/L	MCL	ND	J	0.0734	JB	0.064		0.050		0.047		0.035		0.034		0.031		0.034	M2,J-	0.034		0.046	
Beryllium	0.004 mg/L	MCL	ND	J	0.000142	J	ND	U	<0.0020		<0.0020		<0.0020		<0.0020	U	<0.0020	UJ	<0.002	U	<0.0020	U		
Cadmium	0.005 mg/L	MCL	ND		ND		ND	U	<0.0010		<0.0010		<0.0010		<0.0010	U	<0.0010	M2,UJ	<0.001	U	<0.0010	U		
Chromium	0.1 mg/L	MCL	0.00361	B	0.0178	B	0.0037		0.0007	J	<0.0020		0.0010	B, J	<0.0020		<0.0020	U	<0.0020	M2,U	0.0009	J	0.0043	
Cobalt	0.009 mg/L	Background	0.00388	J	0.00164	JB	ND	U	<0.004		<0.004		<0.004		<0.004	U	<0.004	M2,U	<0.004	U	<0.004	U		
Fluoride	4.0 mg/L	MCL	ND	J	0.129	J	ND	U	<0.20		<0.20		<0.20		<0.20	U	<0.20	U	<0.20	U	<0.20	U	<0.20	M2,UJ
Lead	0.015 mg/L	CCR Rule Value	ND	J	0.000785	J	0.002		<0.002		<0.002		<0.002		<0.002	U	<0.002	M2,UJ	<0.002	U	0.003			
Lithium	0.040 mg/L	CCR Rule Value	0.0326	J	0.0261	J	0.03		0.02		0.03		0.02		0.02		0.02	M2,J-	0.03		0.03			
Mercury	0.002 mg/L	MCL	ND		ND		ND	U	<0.0005		<0.0005		<0.0005		<0.0005	U	<0.0005	U	<0.000005	U	<0.000005	U		
Molybdenum	0.1 mg/L	CCR Rule Value	0.0124		0.00319	J	ND	U	0.003	J	<0.01		<0.01		<0.01	U	<0.01	M2,U	<0.01	U	<0.01	U		
Radium 226	5.0 pCi/L	MCL	2.16		0.952		1.24		0.823		1.88		1.15		1.78		1.32	J	1.83	J	1.72	J	2.01	J-
Radium 228																								
Selenium	0.05 mg/L	MCL	ND		ND		ND	U	<0.003		<0.003		<0.003		<0.003	U	<0.003	M2,U	<0.003	U	<0.003	U		
Thallium	0.002 mg/L	MCL	ND		ND		ND	U	<0.0020		<0.0020		<0.0020		<0.0020	U	<0.0020	M2,UJ	<0.002	U	<0.0020	U		

*All results listed in milligrams per liter (mg/L) unless otherwise noted by the Groundwater Protection Standard (GWPS).
B = Compound was found in the blank and sample.
CCR = coal combustion residuals
D = Results reported from dilution.
D1 = Sample required dilution due to high concentration of target analyte.
D2 = Sample required dilution due to matrix interference.
J- = Qualified as estimated potential low bias during data review.
J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
M1 = Matrix spike recovery was high; the method control sample recovery was acceptable.
M2 = Matrix spike recovery was low; the method control sample recovery was acceptable.
M3 = The accuracy of the spike recovery value is reduced since the analyte concentration in the sample is disproportionate to spike level. The method control sample recovery was acceptable.
MCL = maximum contaminant level
NA = not analyzed
ND = not detected at or above method detection limit.
U = Target analyte was analyzed for, but was below detection limit.
UJ = Non-detect result was qualified as estimated at the reporting limit during data review.

WILSON LANDFILL - GROUNDWATER ANALYTICAL SUMMARY (continued)
MW-104

APPENDIX III CONSTITUENTS	GWPS	GWPS Criteria	DATE															
			4/16/2024		9/30/2024													
			Characterization															
Boron			<0.10	U	<0.10	M2,U												
Calcium			288	D1	327	D1,M3												
Chloride			12.4		11.4													
Fluoride	4.0 mg/L	MCL	<0.20	U	<0.20	U												
Sulfate			1920	D	904	D												
pH (Field Measurement)			6.99		6.88													
Total Dissolved Solids			1150		2070													
APPENDIX IV CONSTITUENTS																		
Antimony	0.006 mg/L	MCL	<0.005	U	<0.005	U												
Arsenic	0.0144 mg/L	Background	0.0004	J	0.0004	J												
Barium	2.0 mg/L	MCL	0.028		0.031													
Beryllium	0.004 mg/L	MCL	<0.0040	U	<0.0020	U												
Cadmium	0.005 mg/L	MCL	<0.0010	U	<0.0010	U												
Chromium	0.1 mg/L	MCL	<0.0020	U	<0.0020	U												
Cobalt	0.009 mg/L	Background	<0.004	U	<0.004	U												
Fluoride	4.0 mg/L	MCL	<0.20	U	<0.20	U												
Lead	0.015 mg/L	CCR Rule Value	<0.002	U	<0.002	U												
Lithium	0.040 mg/L	CCR Rule Value	0.03	D2, V1, J	0.03													
Mercury	0.002 mg/L	MCL	0.0000145	J-	<0.000005	U, V1												
Molybdenum	0.1 mg/L	CCR Rule Value	<0.01	U	<0.01	U												
Radium 226	5.0 pCi/L	MCL	1.41	J	1.50													
Radium 228																		
Selenium	0.05 mg/L	MCL	<0.003	U	<0.003	U												
Thallium	0.002 mg/L	MCL	<0.0020	U	<0.0020	U												

*All results listed in milligrams per liter (mg/L) unless otherwise noted by the Groundwater Protection Standard (GWPS).
CCR = coal combustion residuals
D = Results reported from dilution.
D1 = Sample required dilution due to high concentration of target analyte.
D2 = Sample required dilution due to matrix interference.
J- = Qualified as estimated potential low bias during data review.
J = Result is less than the Reporting Limit but greater than or equal to the method detection limit and the concentration is an approximate value.
M3 = The accuracy of the spike recovery value is reduced since the analyte concentration in the sample is disproportionate to spike level. The method control sample recovery was acceptable.
MCL = maximum contaminant level
ND = Not detected at or above method detection limit
pCi/L = picocuries per liter
U = Target analyte was analyzed for, but was below detection limit.
V1 = Continuing calibration verification (CCV) recovery was above method acceptable limits. This target analyte not detected in the sample.

WILSON LANDFILL - GROUNDWATER ANALYTICAL SUMMARY
MW-105

APPENDIX III CONSTITUENTS	GWPS	GWPS Criteria	DATE															
			11/2/2018		6/27/2019		11/7/2019		4/22/2020		10/13/2020		5/12/2021		9/29/2021		4/28/2022	
			Characterization															
Boron			ND	J	0.348	JB	ND	D2,M4,U	0.33		0.37		0.36		0.34		W E L A B A N D O N E D	
Calcium			124		58.6		72.0	D2,M1	60.4	D1	49.2	D2	59.7	D1	59.4	D1		
Chloride			10.5	B	9.34		10.1		9.5		8.7		9.0		9.1			
Fluoride	4.0 mg/L	MCL	ND	J	0.638		0.55		0.67		0.61		0.60		0.61			
Sulfate			216	JB	37.6		73.7	D	91.8	D	75.4	D	157	D	176	D		
pH (Field Measurement)			6.75		7.70		7.51		7.78		8.02		7.21		7.27			
Total Dissolved Solids			747		548		612		398		550		644		626			
APPENDIX IV CONSTITUENTS																		
Antimony	0.006 mg/L	MCL	ND	JB	0.000186	JB	ND	U	<0.005		<0.005		<0.005		<0.005			
Arsenic	0.0144 mg/L	Background	ND	JB	0.00186	J	ND	U	<0.0010		<0.0010		<0.0010		<0.0010			
Barium	2.0 mg/L	MCL	0.207		0.288	B	0.326		0.255		0.256		0.267		0.260			
Beryllium	0.004 mg/L	MCL	ND	J	0.000398	J	ND	U	<0.0020		<0.0020		<0.0020		<0.0020			
Cadmium	0.005 mg/L	MCL	ND		ND		ND	U	<0.0010		<0.0010		<0.0010		<0.0010			
Chromium	0.1 mg/L	MCL	0.00388	B	0.00784	B	ND	U	<0.0020		<0.0020		0.0011	B, J	<0.0020			
Cobalt	0.009 mg/L	Background	0.00488	J	0.00435	JB	ND	U	<0.004		<0.004		<0.004		<0.004			
Fluoride	4.0 mg/L	MCL	ND	J	0.638		0.55		0.67		0.61		0.60		0.61			
Lead	0.015 mg/L	CCR Rule Value	ND	J	0.00326	J	ND	U	<0.002		<0.002		<0.002		<0.002			
Lithium	0.040 mg/L	CCR Rule Value	0.0141	J	0.0278	J	0.03	M1	0.02		0.02		0.02		0.02			
Mercury	0.002 mg/L	MCL	ND		ND		ND	U	<0.0005		<0.0005		<0.0005		<0.0005			
Molybdenum	0.1 mg/L	CCR Rule Value	0.0131		0.00231	J	0.002	J	0.002	J	0.002	J	0.002	J	0.002	J		
Radium 226	5.0 pCi/L	MCL	1.08		0.558	U	0.829		1.15		1.30		2.14		0.380			
Radium 228																		
Selenium	0.05 mg/L	MCL	ND		ND		ND	U	<0.003		<0.003		<0.003		<0.003			
Thallium	0.002 mg/L	MCL	ND		0.0000510	J	ND	U	<0.0020		<0.0020		<0.0020		<0.0020			

*All results listed in milligrams per liter (mg/L) unless otherwise noted by the Groundwater Protection Standard (GWPS).
B = compound was found in the blank and sample.
CCR = coal combustion residuals
D1 = Sample required dilution due to high concentration of target analyte.
D2 = Sample required dilution due to matrix interference.
J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
M1 = Matrix spike recovery was high; the method control sample recovery was acceptable.
MCL = maximum contaminant level
NA = not analyzed
ND = not detected at or above method detection limit.
U = Target analyte was analyzed for, but was below detection limit

WILSON LANDFILL - CCR ANALYTICAL SUMMARY
MW-105R

APPENDIX III CONSTITUENTS	GWPS	GWPS Criteria	DATE																	
			4/28/2022		9/29/2022		4/25/2023		10/2/2023		4/16/2024		9/30/2024							
			Characterization																	
Boron			<0.10	U	<0.10	U	<0.10	U	<0.10	U	<0.10	U	<0.10	U						
Calcium			214	D1	204	D1	196	D1	182	D1	198	D1	190	D1						
Chloride			12.2	J+	11.5		11.2		11.9		11.8		13.0							
Fluoride	4.0 mg/L	MCL	<0.20	U	<0.20	UJ	0.20		<0.20	U	0.21		<0.20	U						
Sulfate			439	D,M1,J+	410.0	D,J,-	769	D	428	D	899	D	342	D1						
pH (Field Measurement)			6.38		6.71		6.84		6.17		6.96		6.98							
Total Dissolved Solids			1800		1010		1440		1060		1010		1020							
APPENDIX IV CONSTITUENTS																				
Antimony	0.006 mg/L	MCL	<0.005	U	<0.005	U,V1	<0.005	U	<0.005	U	<0.005	U	<0.005	U						
Arsenic	0.0144 mg/L	Background	0.0016		0.0011		0.0008	J	0.0036		0.0016		0.0021							
Barium	2.0 mg/L	MCL	0.033		0.032		0.025		0.033		0.021		0.020							
Beryllium	0.004 mg/L	MCL	<0.0020	U	<0.0020	U,V1	<0.002	U	<0.0020	U	<0.0040	U, D2	<0.0020	U						
Cadmium	0.005 mg/L	MCL	<0.0010	U	<0.0010	U	<0.001	U	<0.0010	U	<0.0010	U	<0.0010	U						
Chromium	0.1 mg/L	MCL	<0.0020	U	<0.0020	U	<0.002	U	<0.0020	U	<0.0020	U	<0.0020	U						
Cobalt	0.009 mg/L	Background	<0.004	U	<0.004	U	<0.004	U	<0.004	U	<0.004	U	<0.004	U						
Fluoride	4.0 mg/L	MCL	<0.20	U	<0.20	UJ	0.20		<0.20	U	0.21		<0.20	U						
Lead	0.015 mg/L	CCR Rule Value	<0.002	U	<0.002	U	<0.002	U	<0.002	U	0.002		<0.002	U						
Lithium	0.040 mg/L	CCR Rule Value	0.03		0.03		0.03		0.03		0.03	D2, M2, V1, J, J-	0.03							
Mercury	0.002 mg/L	MCL	<0.0005	U	<0.0005	U	<0.000005	U	<0.000005	U	0.0000038	J	<0.000005	U, V1						
Molybdenum	0.1 mg/L	CCR Rule Value	0.005	J	0.002	J	<0.01	U	<0.01	U	<0.01	U	<0.01	U						
Radium 226	5.0 pCi/L	MCL	1.86	J	1.35	J	2.49	J	1.85	J	2.53	J	2.33							
Radium 228																				
Selenium	0.05 mg/L	MCL	<0.003	U	<0.003	U	<0.003	U	<0.003	U	<0.003	U	<0.003	U						
Thallium	0.002 mg/L	MCL	0.0001	V1,J	<0.0020	U	<0.002	U	<0.0020	U	<0.0020	U	<0.0020	U						

*All results listed in milligrams per liter (mg/L) unless otherwise noted by the Groundwater Protection Standard (GWPS).
B = compound was found in the blank and sample.
CCR = coal combustion residuals
D1 = Sample required dilution due to high concentration of target analyte.
J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
J+ = Potential high bias
M1 = Matrix spike recovery was high; the method control sample recovery was acceptable.
MCL = maximum contaminant level
NA = not analyzed
ND = not detected at or above method detection limit.
U = Target analyte was analyzed for, but was below detection limit.
UJ = Non-detect result was qualified as estimated at the reporting limit during data review.
V1 = Continuing calibration verification (CCV) recovery was above method acceptable limits. This target analyte not detected in the sample.

WILSON LANDFILL - GROUNDWATER ANALYTICAL SUMMARY
MW-110

APPENDIX III CONSTITUENTS	GWPS	GWPS Criteria	DATE																	
			11/2/2018	6/27/2019	11/7/2019	4/22/2020	10/13/2020	5/12/2021	9/29/2021	4/28/2022	9/28/2022	4/25/2023	10/2/2023	4/16/2024						
			Characterization																	
Boron			ND J	0.0716 JB	ND U D2	<0.10	<0.10	<0.10	<0.10	<0.10 U	<0.10 U	<0.10 U	<0.10 M2,U	<0.10 U						
Calcium			33.8	38.9	47.6 D2	39.9 D1	37.9 D2	39.7 D1	33.8 D1	40.7 D1	38.3 D1	37.7 D1	39.3 D1, M1	47.1 D1						
Chloride			14.4 B	11.1	10.0	11.5	10.5	11.2	10.9	11.4	9.7	11.3	9.7	11.7						
Fluoride	4.0 mg/L	MCL	ND J	0.229	0.23	0.28	0.24	0.26	0.27	0.23	0.24	0.27	0.24	0.28						
Sulfate			102 B	70.0	61.2 D	71.7 D	56 D	75.2 D	101 D	94.6 D	68.4	77.7	68.4	82.5						
pH (Field Measurement)			6.93	6.92	6.83	6.89	6.87	6.43	6.88	6.19	6.65	6.71	6.84	6.39						
Total Dissolved Solids			333	296	348	208	278	302	260	2590	270	336	278	316						
APPENDIX IV CONSTITUENTS																				
Antimony	0.006 mg/L	MCL	ND JB	0.000130 JB	ND U	<0.005	<0.005	<0.005	<0.005	<0.005 U	<0.005 U,V1	<0.005 U	<0.005 U	0.003 J						
Arsenic	0.0144 mg/L	Background	ND JB	0.00118 J	ND U	0.0019	0.0011	0.0010	0.0018	0.0029	0.0015	0.0023	0.0040 J	0.0062 J						
Barium	2.0 mg/L	MCL	ND J	0.0535 JB	0.051	0.051	0.053	0.054	0.046	0.057	0.050	0.057	0.068	0.076 J						
Beryllium	0.004 mg/L	MCL	ND	ND	ND U	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020 U	<0.0020 U,V1	<0.002 U	<0.0020 U	<0.0020 U						
Cadmium	0.005 mg/L	MCL	ND	ND	ND U	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010 U	<0.0010 U	<0.001 U	<0.0010 U	<0.0010 U						
Chromium	0.1 mg/L	MCL	0.00967 B	0.00217 JB	ND U	0.0007 J	<0.0020	0.0009 B,J	<0.0020	<0.0020 U	<0.0020 U	<0.002 U	0.0016 J	<0.0020 U						
Cobalt	0.009 mg/L	Background	0.00240 J	0.000827 JB	ND U	<0.004	<0.004	<0.004	<0.004	<0.004 U	<0.004 U	<0.004 U	<0.004 U	<0.004 U						
Fluoride	4.0 mg/L	MCL	ND J	0.229	0.23	0.28	0.24	0.26	0.27	0.23	0.24	0.27	0.24	0.28						
Lead	0.015 mg/L	CCR Rule Value	ND J	0.000539 J	ND U	<0.002	<0.002	<0.002	<0.002	<0.002 U	<0.002 U	<0.002 U	0.001 J	<0.002 U						
Lithium	0.040 mg/L	CCR Rule Value	0.0122 J	ND	0.006 J	<0.02	<0.02	<0.02	<0.02	<0.02 U	<0.02 V1,U	<0.02 U	0.005 J	<0.02 U						
Mercury	0.002 mg/L	MCL	ND	ND	ND U	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005 U	<0.0005 U	<0.000005 U	0.0000026 J	<0.000005 U						
Molybdenum	0.1 mg/L	CCR Rule Value	ND J	ND	ND U	<0.01	<0.01	<0.01	<0.01	<0.01 U	<0.01 U	<0.01 U	<0.01 U	<0.01 U						
Radium 226	5.0 pCi/L	MCL	1.19	0.816	1.10	1.53	1.49	1.37	1.36	0.594 J	1.69 J	0.546 J	1.41 J	1.54 J						
Radium 228																				
Selenium	0.05 mg/L	MCL	ND	ND	ND U	<0.003	<0.003	<0.003	<0.003	<0.003 U	<0.003 U	<0.003 U	<0.003 U	<0.003 U						
Thallium	0.002 mg/L	MCL	ND	ND	ND U	<0.0020	<0.0020	<0.0020	<0.0020	<0.002 V1,U	<0.002 U	<0.002 U	<0.0020 U	<0.0020 U						

*All results listed in milligrams per liter (mg/L) unless otherwise noted by the Groundwater Protection Standard (GWPS).
B = Compound was found in the blank and sample.
CCR = coal combustion residuals
D = Results reported from dilution.
D1 = Sample required dilution due to high concentration of target analyte.
D2 = Sample required dilution due to matrix interference.
J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
MCL = maximum contaminant level
NA = not analyzed
ND = not detected at or above method detection limit.
pCi/L = picocuries per liter
U = Target analyte was analyzed for, but was below detection limit.

WILSON LANDFILL - GROUNDWATER ANALYTICAL SUMMARY (continued)
MW-110

APPENDIX III CONSTITUENTS	GWPS	GWPS Criteria	DATE														
			9/30/2024														
			Characterization														
Boron			<0.10	U													
Calcium			39.8	D1													
Chloride			10.2														
Fluoride	4.0 mg/L	MCL	0.26														
Sulfate			69.1														
pH (Field Measurement)			6.73														
Total Dissolved Solids			304														
APPENDIX IV CONSTITUENTS																	
Antimony	0.006 mg/L	MCL	<0.005	U													
Arsenic	0.0144 mg/L	Background	0.0042														
Barium	2.0 mg/L	MCL	0.063														
Beryllium	0.004 mg/L	MCL	<0.0020	U													
Cadmium	0.005 mg/L	MCL	<0.0010	U													
Chromium	0.1 mg/L	MCL	<0.0020	U													
Cobalt	0.009 mg/L	Background	<0.004	U													
Fluoride	4.0 mg/L	MCL	0.26														
Lead	0.015 mg/L	CCR Rule Value	<0.002	U													
Lithium	0.040 mg/L	CCR Rule Value	<0.02	U													
Mercury	0.002 mg/L	MCL	<0.000005	U, V1													
Molybdenum	0.1 mg/L	CCR Rule Value	<0.01	U													
Radium 226	5.0 pCi/L	MCL	1.48														
Radium 228																	
Selenium	0.05 mg/L	MCL	<0.003	U													
Thallium	0.002 mg/L	MCL	<0.0020	U													

*All results listed in milligrams per liter (mg/L) unless otherwise noted by the Groundwater Protection Standard (GWPS).
CCR = coal combustion residuals
D = Results reported from dilution.
D1 = Sample required dilution due to high concentration of target analyte.
J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
M1 = Matrix spike recovery was high; the method control sample recovery was acceptable.
M2 = Matrix spike recovery was low; the method control sample recovery was acceptable.
MCL = maximum contaminant level
ND = Not detected at or above method detection limit.
pCi/L = picocuries per liter
U = Target analyte was analyzed for, but was below detection limit.
V1 = Continuing calibration verification (CCV) recovery was above method acceptable limits. This target analyte not detected in the sample.

WILSON LANDFILL - GROUNDWATER ANALYTICAL SUMMARY
MW-10D

APPENDIX III CONSTITUENTS	GWPS	GWPS Criteria	DATE																	
			4/27/2022		9/27/2022		4/24/2023		10/2/2023		4/17/2024		10/2/2024							
			Characterization																	
Boron			3.16	D2	3.11	D1	2.62	D1,M3	2.65	D1	2.73	D1	2.92	D1						
Calcium			482	D1	548	D1	553	D1,M3	523	D1	562	D1	544	D1						
Chloride			145	D	195	D	36.2	D2	208	D	419	D	168	D						
Fluoride	4.0 mg/L	MCL	0.41		0.35		0.47		0.41		0.38		0.45							
Sulfate			1150	D	1920.0	D1	389	D2	2240	D	4080	D	1580	D						
pH (Field Measurement)			7.11		6.67		6.44		6.37		6.50		6.22							
Total Dissolved Solids			1070		2660		2510		2870		2330		2240							
APPENDIX IV CONSTITUENTS																				
Antimony	0.006 mg/L	MCL	<0.005	U	<0.005	U	<0.005	U	<0.005	U	<0.005	U	<0.005	U						
Arsenic	0.0144 mg/L	Background	0.0029		0.0036		0.0025		0.0032		0.0025		0.0017							
Barium	2.0 mg/L	MCL	0.016		0.018		0.017		0.019		0.016		0.017							
Beryllium	0.004 mg/L	MCL	<0.0020	U	<0.0020	U,V1	<0.002	U	<0.0020	U	<0.0040	U	<0.0020	U						
Cadmium	0.005 mg/L	MCL	<0.0010	U	<0.0010	U	<0.001	U	<0.0010	U	<0.0010	U	<0.0010	U						
Chromium	0.1 mg/L	MCL	<0.0020	U	<0.0020	U	<0.002	U	<0.0020	U	<0.0020	U	<0.0020	U						
Cobalt	0.009 mg/L	Background	0.005		<0.0040	U	0.004		<0.0040	U	0.009		0.010							
Fluoride	4.0 mg/L	MCL	0.41		0.35		0.47		0.41		0.38		0.45							
Lead	0.015 mg/L	CCR Rule Value	<0.002	U	<0.002	U	<0.002	U	<0.002	U	<0.002	U	<0.002	U						
Lithium	0.040 mg/L	CCR Rule Value	0.07		0.07		0.06	J-,M2	0.09		0.08	D2	0.08							
Mercury	0.002 mg/L	MCL	<0.0005	U	<0.0005	U	<0.000005	U	<0.000005	U	<0.000005	U	17.2							
Molybdenum	0.1 mg/L	CCR Rule Value	0.009	J	0.004	J	0.006	J	0.004	J	0.004	J	0.004	J						
Radium 226	5.0 pCi/L	MCL	1.63		1.39	J	0.465	J	1.37	J	1.85	J	1.75							
Radium 228																				
Selenium	0.05 mg/L	MCL	<0.003	U	<0.003	U	<0.003	U	<0.003	U	<0.003	U	<0.003	U						
Thallium	0.002 mg/L	MCL	<0.0020	U	<0.0020	U	<0.002	U	<0.0020	U	<0.0020	U	<0.0020	U						

*All results listed in milligrams per liter (mg/L) unless otherwise noted by the Groundwater Protection Standard (GWPS).
B = compound was found in the blank and sample.
CCR = coal combustion residuals
D2 = Sample required dilution due to matrix interference.
J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
J- =Qualified as estimated potential low bias during data review.
M2 = Matrix spike recovery was low; the method control sample recovery was acceptable.
M3 = The accuracy of the spike recovery value is reduced since the analyte concentration in the sample is disproportionate to spike level. The method control sample recovery was acceptable.
MCL = maximum contaminant level
NA = not analyzed
ND = not detected at or above method detection limit.
U = Target analyte was analyzed for, but was below detection limit.
V1 = Continuing calibration verification (CCV) recovery was above method acceptable limits. This target analyte not detected in the sample.

WILSON LANDFILL - CCR ANALYTICAL SUMMARY
MW-111

APPENDIX III CONSTITUENTS	GWPS	GWPS Criteria	DATE																	
			4/28/2022		9/30/2022		4/24/2023		10/2/2023		4/16/2024		9/30/2024							
			Characterization																	
Boron			0.23		0.22		0.23		0.21		0.22		0.20							
Calcium			627	D1	637	D1	552	D1	510	D1	532	D1	542	D1						
Chloride			3.8		3.7	M2,J-	<10.0	D2, U	3.3		3.9		3.6							
Fluoride	4.0 mg/L	MCL	<0.20	U	0.24	M2,J-	0.27		0.24		0.28		<0.20	U						
Sulfate			1800	D,H2	2640	D,M2	399	D2	3210	D	4500	D	1740	D						
pH (Field Measurement)			6.43		6.59		7.24		6.24		6.17		6.39							
Total Dissolved Solids			304		3300		3220		3770		3330		2340							
APPENDIX IV CONSTITUENTS																				
Antimony	0.006 mg/L	MCL	<0.005	U	<0.005	V1,U	<0.005	U	<0.005	U	0.003000	J	<0.005	U						
Arsenic	0.0144 mg/L	Background	0.0027		0.0026		0.0024		0.0024		0.0024		0.0024							
Barium	2.0 mg/L	MCL	0.021		0.019		0.018		0.019		0.018		0.015							
Beryllium	0.004 mg/L	MCL	<0.0020	U	<0.0020	U	<0.002	U	<0.0020	U	<0.0020	U	<0.0020	U						
Cadmium	0.005 mg/L	MCL	<0.0010	U	<0.0010	U	<0.001	U	<0.0010	U	<0.0010	U	<0.0010	U						
Chromium	0.1 mg/L	MCL	<0.0020	U	<0.0020	U	<0.002	U	<0.0020	U	<0.0020	U	<0.0020	U						
Cobalt	0.009 mg/L	Background	0.01100		0.011000		0.011		0.012		0.012		0.013							
Fluoride	4.0 mg/L	MCL	<0.20	U	0.24	M2,J-	0.27		0.24		0.28		<0.20	U						
Lead	0.015 mg/L	CCR Rule Value	<0.002	U	<0.002	U	<0.002	U	<0.002	U	<0.002	U	<0.002	U						
Lithium	0.040 mg/L	CCR Rule Value	0.04		0.03		0.03		0.04		0.04		0.03							
Mercury	0.002 mg/L	MCL	<0.0005	U	<0.0005	UJ	<0.000005	U	<0.000005	U	<0.000005	U	<0.000005	U, V1						
Molybdenum	0.1 mg/L	CCR Rule Value	0.003	J	0.003	J	0.003	J	0.003	J	0.003	J	0.003	J						
Radium 226	5.0 pCi/L	MCL	1.51	J	1.65	J	0.913	J	1.18	J	1.12	J	0.705							
Radium 228																				
Selenium	0.05 mg/L	MCL	<0.003	U	<0.003	U	<0.003	U	<0.003	U	<0.003	U	<0.003	U						
Thallium	0.002 mg/L	MCL	0.0001	V1,U	0.0001	U	<0.002	U	<0.0020	U	<0.0020	U	<0.0020	U						

*All results listed in milligrams per liter (mg/L) unless otherwise noted by the Groundwater Protection Standard (GWPS).
B = Compound was found in the blank and sample.
CCR = coal combustion residuals
D2 = Sample required dilution due to matrix interference.
H2 = Initial analysis within holding time. Reanalysis was past holding time.
J- = Qualified as estimated potential low bias during data review.
J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
M2 = Matrix spike recovery was low; the method control sample recovery was acceptable.
MCL = maximum contaminant level
NA = not analyzed
ND = not detected at or above method detection limit.
U = Target analyte was analyzed for, but was below detection limit.
UJ = Non-detect result was qualified as estimated at the reporting limit during data review.
V1 = Continuing calibration verification (CCV) recovery was above method acceptable limits. This target analyte not detected in the sample.

WILSON LANDFILL - GROUNDWATER ANALYTICAL SUMMARY
MW-112

APPENDIX III CONSTITUENTS	GWPS	GWPS Criteria	DATE																	
			4/28/2022		9/30/2022		4/24/2023		10/2/2023		4/16/2024		10/2/2024							
			Characterization																	
Boron			0.15		0.15		0.14		0.14		0.12		0.13							
Calcium			250	D1	283	D1	246	D1	243	D1	223	D1	241	D1						
Chloride			51.7		3.6	H2,J-	<5.0	D2, U	3.3		3.1		3.1							
Fluoride	4.0 mg/L	MCL	<0.20	U	<0.20	U	<0.20	U	<0.20	U	0.2		<0.20	U						
Sulfate			512	D	602	D	157	D2	748	D	1000	D	498	D1						
pH (Field Measurement)			6.35		6.82		6.19		6.28		6.88		6.70							
Total Dissolved Solids			1040	J-, H2	1180		1000		1270		988		932							
APPENDIX IV CONSTITUENTS																				
Antimony	0.006 mg/L	MCL	<0.005	U	<0.005	U,V1	<0.005	U	<0.005	U	0.003	J	<0.005	U						
Arsenic	0.0144 mg/L	Background	0.0013		0.0019		0.0015		0.0017		0.0017		0.0017							
Barium	2.0 mg/L	MCL	0.028		0.032		0.027		0.031		0.024		0.027							
Beryllium	0.004 mg/L	MCL	<0.0020	U	<0.0020	U,V1	<0.002	U	<0.0020	U	<0.0020	U	<0.0020	U						
Cadmium	0.005 mg/L	MCL	<0.0010	U	<0.0010	U	<0.001	U	<0.0010	U	<0.0010	U	<0.0010	U						
Chromium	0.1 mg/L	MCL	<0.0020	U	<0.0020	U	<0.002	U	<0.0020	U	<0.0020	U	<0.0020	U						
Cobalt	0.009 mg/L	Background	0.004		0.005		0.005		0.005		0.005		0.005							
Fluoride	4.0 mg/L	MCL	<0.20	U	<0.20	U	<0.20	U	<0.20	U	0.2		<0.20	U						
Lead	0.015 mg/L	CCR Rule Value	<0.002	U	<0.002	U	<0.002	U	<0.002	U	<0.002	U	<0.002	U						
Lithium	0.040 mg/L	CCR Rule Value	0.01	J	0.01	V1,J	0.01	J	0.01	J	0.01	J	0.01	J						
Mercury	0.002 mg/L	MCL	<0.0005	U	<0.0005	U	<0.000005	U	<0.000005	Y1,U	<0.000005	U	<0.000005	U, V1						
Molybdenum	0.1 mg/L	CCR Rule Value	0.002	J	0.002	J	0.002	J	0.002	J	0.002	J	0.002	J						
Radium 226	5.0 pCi/L	MCL	0.173	J	1.22	J	0.753	J	1.14	J	0.769	J	1.58							
Radium 228																				
Selenium	0.05 mg/L	MCL	<0.003	U	<0.003	U	<0.003	U	<0.003	U	<0.003	U	<0.003	U						
Thallium	0.002 mg/L	MCL	<0.0020	V1,U	<0.0020	U	<0.002	U	<0.0020	U	<0.0020	U	<0.0020	U						

*All results listed in milligrams per liter (mg/L) unless otherwise noted by the Groundwater Protection Standard (GWPS).
B = Compound was found in the blank and sample.
CCR = coal combustion residuals
H2 = Initial analysis within holding time. Reanalysis was past holding time.
J- = Potential low bias
J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
MCL = maximum contaminant level
NA = not analyzed
ND = not detected at or above method detection limit.
U = Target analyte was analyzed for, but was below detection limit.
V1 = Continuing calibration verification (CCV) recovery was above method acceptable limits. This target analyte not detected in the sample.

WILSON LANDFILL - GROUNDWATER ANALYTICAL SUMMARY
MW-113

APPENDIX III CONSTITUENTS	GWPS	GWPS Criteria	DATE																	
			4/28/2022		9/28/2022		4/24/2023		10/2/2023		4/16/2024		9/30/2024							
			Characterization																	
Boron			<0.10	U	<0.10	U	<0.10	U	<0.10	U	<0.10	U								
Calcium			206	D1	256	D1	219	D1	186	D1	226	D1	207	D1						
Chloride			35.0		37.6		12.3	D2	39.8		36.9		40.8							
Fluoride	4.0 mg/L	MCL	0.22		<0.20	U	<0.20	U	0.22		0.22		<0.20	U						
Sulfate			557	D, M1	1070.0	D	228	D2	1190	D	1890	D	827	D1						
pH (Field Measurement)			6.17		6.62		7.25		6.32		6.67		6.52							
Total Dissolved Solids			1200		1660		1650		1780		1340		1410							
APPENDIX IV CONSTITUENTS																				
Antimony	0.006 mg/L	MCL	0.002	J	<0.005	U	<0.005	U	<0.005	U	0.003	J	<0.005	U						
Arsenic	0.0144 mg/L	Background	0.0116		0.0229		0.0278		0.0291		0.0213		0.0175							
Barium	2.0 mg/L	MCL	0.053		0.029		0.022		0.020		0.020		0.017							
Beryllium	0.004 mg/L	MCL	<0.0020	U	<0.0020	U,V1	<0.002	U	<0.002	U	<0.0020	U	<0.0020	U						
Cadmium	0.005 mg/L	MCL	<0.0010	U	<0.0010	U	<0.001	U	<0.0010	U	<0.0010	U	<0.0010	U						
Chromium	0.1 mg/L	MCL	<0.0020	U	<0.0020	U	<0.002	U	<0.0020	U	<0.0020	U	0.0006	J						
Cobalt	0.009 mg/L	Background	0.037		0.018		0.006		<0.004	U	<0.004	U	<0.004	U						
Fluoride	4.0 mg/L	MCL	0.22		<0.20	U	<0.20	U	0.22		0.22		<0.20	U						
Lead	0.015 mg/L	CCR Rule Value	<0.002	U	<0.002	U	<0.002	U	<0.002	U	<0.002	U	<0.002	U						
Lithium	0.040 mg/L	CCR Rule Value	0.04		0.03		0.03		0.05		0.04		0.04							
Mercury	0.002 mg/L	MCL	<0.0005	U	<0.0005	U	<0.000005	UJ	<0.000005	M2,UJ	<0.000005	U	<0.000005	U, V1						
Molybdenum	0.1 mg/L	CCR Rule Value	0.02		0.007	J	0.003	J	0.003	J	0.002	J	0.002	J						
Radium 226	5.0 pCi/L	MCL	0.976	J	0.969	J	1.60	J	2.89	J	3.12	J	2.74							
Radium 228																				
Selenium	0.05 mg/L	MCL	<0.003	U	<0.003	U	<0.003	U	<0.003	U	<0.003	U	<0.003	U						
Thallium	0.002 mg/L	MCL	<0.02	V1,U	<0.02	U	<0.002	U	<0.0020	U	<0.0020	U	<0.0020	U						

*All results listed in milligrams per liter (mg/L) unless otherwise noted by the Groundwater Protection Standard (GWPS).
B = compound was found in the blank and sample.
CCR = coal combustion residuals
D = Results reported from dilution.
J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
M2 = Matrix spike recovery was low; the method control sample recovery was acceptable.
MCL = maximum contaminant level
NA = not analyzed
ND = not detected at or above method detection limit.
U = Target analyte was analyzed for, but was below detection limit.
UJ = Non-detect result was qualified as estimated at the reporting limit during data review.
V1 = Continuing calibration verification (CCV) recovery was above method acceptable limits. This target analyte not detected in the sample.

WILSON LANDFILL - GROUNDWATER ANALYTICAL SUMMARY
MW-114

APPENDIX III CONSTITUENTS	GWPS	GWPS Criteria	DATE																	
			4/28/2022		9/28/2022		4/24/2023		10/2/2023		4/16/2024		9/30/2024							
			Characterization																	
Boron			<0.10	U	<0.10	U	<0.10	M2, U	<0.10	U	<0.10	U								
Calcium			115	D1	130	D1	106	D1, M3	115	D1	103	D1	105	D1						
Chloride			40.0		31.6		28.0	D2	32.1		34.4		37.0							
Fluoride	4.0 mg/L	MCL	0.22		0.22		0.25		0.23		0.27		0.20							
Sulfate			138	D	151.0		132	D2	162		157		174							
pH (Field Measurement)			6.69		6.71		7.83		5.55		7.25		7.01							
Total Dissolved Solids			1510		864		1150		632		724		924							
APPENDIX IV CONSTITUENTS																				
Antimony	0.006 mg/L	MCL	<0.005	U	<0.005	U,V1	<0.005	U	<0.005	U	0.003000	J	<0.005	U						
Arsenic	0.0144 mg/L	Background	0.0025		0.0048		0.002		0.0031		0.0015		0.0017							
Barium	2.0 mg/L	MCL	0.067		0.062		0.053		0.070		0.045		0.049							
Beryllium	0.004 mg/L	MCL	<0.0020	U	<0.0020	U,V1	<0.002	U	<0.0020	U	<0.0020	U	<0.0020	U						
Cadmium	0.005 mg/L	MCL	<0.0010	U	<0.0010	U	<0.001	U	<0.0010	U	<0.0010	U	<0.0010	U						
Chromium	0.1 mg/L	MCL	<0.0020	U	<0.0020	U	<0.002	U	<0.0020	U	<0.0020	U	<0.0020	U						
Cobalt	0.009 mg/L	Background	<0.004	U	<0.004	U	<0.004	U	<0.004	U	<0.004	U	<0.004	U						
Fluoride	4.0 mg/L	MCL	0.22		0.22		0.25		0.23		0.27		0.20							
Lead	0.015 mg/L	CCR Rule Value	<0.002	U	<0.002	U	<0.002	U	<0.002	U	<0.002	U	<0.002	U						
Lithium	0.040 mg/L	CCR Rule Value	0.02		0.02		0.02	M1	0.02		0.02		0.02							
Mercury	0.002 mg/L	MCL	<0.0005	U	<0.0005	U	<0.000005	U	<0.000005	U	<0.000005	U	<0.000005	U, V1						
Molybdenum	0.1 mg/L	CCR Rule Value	0.007	JU	0.004	J	0.004	J	0.003	J	0.002	J	0.002	J						
Radium 226	5.0 pCi/L	MCL	1.86	J	1.22	J	2.04	J	3.17	J	2.23	J	2.53							
Radium 228																				
Selenium	0.05 mg/L	MCL	<0.003	U	<0.003	U	<0.003	U	<0.003	U	<0.003	U	<0.003	U						
Thallium	0.002 mg/L	MCL	<0.002	V1,U	<0.002	U	<0.002	U	<0.0020	U	<0.0020	U	<0.0020	U						

*All results listed in milligrams per liter (mg/L) unless otherwise noted by the Groundwater Protection Standard (GWPS).
B = Compound was found in the blank and sample.
CCR = coal combustion residuals
D = Results reported from dilution.
J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
M1 = Matrix spike recovery was high; the method control sample recovery was acceptable.
M2 = Matrix spike recovery was low; the method control sample recovery was acceptable.
M3 = The accuracy of the spike recovery value is reduced since the analyte concentration in the sample is disproportionate to spike level. The method control sample recovery was acceptable.
MCL = maximum contaminant level
NA = not analyzed
ND = not detected at or above method detection limit.
U = Target analyte was analyzed for, but was below detection limit.
V1 = Continuing calibration verification (CCV) recovery was above method acceptable limits. This target analyte not detected in the sample.

APPENDIX C – LABORATORY ANALYTICAL REPORTS



Certificate of Analysis 4042964

Dawn Storckman
Big Rivers Electric Corporation Wilson Station
PO Box 24
Henderson, KY 42419

Customer ID: 44-100168
Report Printed: 07/05/2024 15:12

Project Name: Wilson Groundwater Wells 092-00004

Workorder: 4042964

Dear Dawn Storckman

Enclosed are the analytical results for samples received by the laboratory 04/19/2024 11:37.

The results relate to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services LLC Kentucky - Madisonville

If you have any questions concerning this report, please feel free to contact me.



#460210 Madisonville, KY
#460291 Pikeville, KY
#E871136 Englewood, OH

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Rob Whittington, Project Manager



SAMPLE SUMMARY

Lab ID	Client Sample ID/Alias	Matrix	Date Collected	Date Received	Sampled By
4042964-09	MW4D/	Groundwater	04/17/2024 09:45	04/19/2024 11:37	Ashley Hall
4042964-10	Mercury Field Blank MW-4D/	Water	04/17/2024 09:45	04/19/2024 11:37	Ashley Hall
4042964-11	MW5/	Groundwater	04/17/2024 07:30	04/19/2024 11:37	Rachel Collins
4042964-12	Mercury Field Blank MW-5/	Water	04/17/2024 07:30	04/19/2024 11:37	Rachel Collins
4042964-13	MW6/	Groundwater	04/16/2024 13:50	04/19/2024 11:37	Ashley Hall
4042964-14	Mercury Field Blank MW-6/	Water	04/16/2024 13:50	04/19/2024 11:37	Ashley Hall
4042964-15	MW7/	Groundwater	04/16/2024 12:40	04/19/2024 11:37	Ashley Hall
4042964-16	Mercury Field Blank MW-7/	Water	04/16/2024 12:40	04/19/2024 11:37	Ashley Hall
4042964-17	MW8/	Groundwater	04/16/2024 12:40	04/19/2024 11:37	Rachel Collins
4042964-18	Mercury Field Blank MW-8/	Water	04/16/2024 12:40	04/19/2024 11:37	Rachel Collins
4042964-19	MW10/	Groundwater	04/16/2024 09:05	04/19/2024 11:37	Dave Medley
4042964-20	Mercury Field Blank MW-10/	Water	04/16/2024 09:05	04/19/2024 11:37	Dave Medley
4042964-21	MW-10D/	Groundwater	04/17/2024 07:45	04/19/2024 11:37	Dave Medley
4042964-22	Mercury Field Blank MW-10D/	Water	04/17/2024 07:45	04/19/2024 11:37	Dave Medley
4042964-23	MW102/	Groundwater	04/16/2024 10:50	04/19/2024 11:37	Ashley Hall
4042964-24	Mercury Field Blank MW-102/	Water	04/16/2024 10:50	04/19/2024 11:37	Ashley Hall
4042964-25	MW104/	Groundwater	04/16/2024 14:35	04/19/2024 11:37	Dave Medley
4042964-26	Mercury Field Blank MW-104/	Water	04/16/2024 14:35	04/19/2024 11:37	Dave Medley
4042964-27	MW-105R/	Groundwater	04/16/2024 07:40	04/19/2024 11:37	Dave Medley
4042964-28	Mercury Field Blank MW-105R/	Water	04/16/2024 07:40	04/19/2024 11:37	Dave Medley
4042964-29	MW110/	Groundwater	04/16/2024 07:20	04/19/2024 11:37	Rachel Collins
4042964-30	Mercury Field Blank MW-110/	Water	04/16/2024 07:20	04/19/2024 11:37	Rachel Collins
4042964-31	MW-111/	Groundwater	04/16/2024 09:25	04/19/2024 11:37	Rachel Collins
4042964-32	Mercury Field Blank MW-111/	Water	04/16/2024 09:25	04/19/2024 11:37	Rachel Collins
4042964-33	MW-112/	Groundwater	04/16/2024 09:15	04/19/2024 11:37	Ashley Hall
4042964-34	Mercury Field Blank MW-112/	Water	04/16/2024 09:15	04/19/2024 11:37	Ashley Hall
4042964-35	MW-113/	Groundwater	04/16/2024 09:50	04/19/2024 11:37	Dave Medley
4042964-36	Mercury Field Blank MW-113/	Water	04/16/2024 09:50	04/19/2024 11:37	Dave Medley



Pace Analytical Services, LLC

P.O. Box 907

Madisonville, KY 42431

270.821.7375

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SAMPLE SUMMARY

Lab ID	Client Sample ID/Alias	Matrix	Date Collected	Date Received	Sampled By
4042964-37	MW-114/	Groundwater	04/16/2024 12:45	04/19/2024 11:37	Dave Medley
4042964-38	Mercury Field Blank MW-114/	Water	04/16/2024 12:45	04/19/2024 11:37	Dave Medley
4042964-41	Well Duplicate 2/	Groundwater	04/16/2024 07:42	04/17/2024 0:00	Rachel Collins
4042964-42	Mercury Field Blank Well Dup-2/	Water	04/16/2024 07:42	04/19/2024 11:37	Rachel Collins
4042964-43	Field Blank/	Water	04/17/2024 10:30	04/19/2024 11:37	Ashley Hall
4042964-44	Mercury Field Blank/	Groundwater	04/17/2024 10:30	04/19/2024 11:37	Ashley Hall



<u>LabNumber</u>	<u>Measurement</u>	<u>Value</u>
4042964-09	Field Conductance	4880
	Field pH	6.11
	Field Temp (C)	18.24
4042964-11	Field Conductance	4370
	Field Dissolved Oxygen	0.33
	Field pH	6.30
	Field Temp (C)	18.16
4042964-13	Field Turbidity	510
	Field Conductance	2620
	Field pH	6.67
4042964-15	Field Temp (C)	17.90
	Field Conductance	2220
	Field pH	6.79
4042964-17	Field Temp (C)	18.35
	Field Conductance	1540
	Field Dissolved Oxygen	0.09
4042964-19	Field pH	6.30
	Field Temp (C)	18.62
	Field Turbidity	31.0
	Field Conductance	3460
4042964-21	Field pH	5.89
	Field Temp (C)	19.85
	Field Conductance	3370
4042964-23	Field pH	6.50
	Field Temp (C)	18.33
	Field Conductance	1050
4042964-25	Field pH	6.94
	Field Temp (C)	16.78
	Field Conductance	1920
4042964-27	Field pH	6.99
	Field Temp (C)	22.20
	Field Conductance	1250
4042964-29	Field pH	6.96
	Field Temp (C)	16.45
	Field Conductance	527
4042964-31	Field Dissolved Oxygen	0.45
	Field pH	6.39
	Field Temp (C)	15.86
	Field Turbidity	23.3
4042964-33	Field Conductance	3180
	Field Dissolved Oxygen	0.27
	Field pH	6.17
	Field Temp (C)	16.74
4042964-35	Field Turbidity	0.0
	Field Conductance	1180
	Field pH	6.88
4042964-37	Field Temp (C)	15.02
	Field Conductance	1990
	Field pH	6.67
4042964-41	Field Temp (C)	18.18
	Field Conductance	910
	Field pH	7.25
4042964-41	Field Temp (C)	20.42
	Field Conductance	527
	Field Dissolved Oxygen	0.45
	Field pH	6.39
	Field Temp (C)	15.86



Pace Analytical Services, LLC

P.O. Box 907

Madisonville, KY 42431

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4042964-41

Field Turbidity

23.3

Work Order Comments:

Corrected Report:

This report has been issued as a revision of the previous report dated 5/22/24@0852. Fraction 19 Sulfate data updated.



ANALYTICAL RESULTS

Lab Sample ID: **4042964-09**Description: **MW4D**

Sample Collection Date Time: 04/17/2024 09:45

Sample Received Date Time: 04/19/2024 11:37

Metals by SW846 6000 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Antimony	ND	U	mg/L	0.005	0.002	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:13	MRWD
Arsenic	0.0037		mg/L	0.0010	0.0004	SW846-6020 A	04/22/2024 09:18	05/05/2024 19:53	DMH
Barium	0.013		mg/L	0.004	0.001	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:13	MRWD
Beryllium	ND	D2, U	mg/L	0.0040	0.0020	SW846-6020 A	05/21/2024 08:25	05/21/2024 12:24	DMH
Boron	7.00	D1	mg/L	1.00	1.00	SW846 6010 B	04/22/2024 09:18	05/03/2024 21:14	AKB
Cadmium	ND	U	mg/L	0.0010	0.0001	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:13	MRWD
Calcium	633	D1	mg/L	50.0	25.0	SW846 6010 B	04/22/2024 09:18	05/03/2024 21:17	AKB
Chromium	ND	U	mg/L	0.0020	0.0006	SW846-6020 A	04/22/2024 09:18	05/05/2024 19:53	DMH
Cobalt	0.058		mg/L	0.004	0.004	SW846-6020 A	04/22/2024 09:18	05/05/2024 19:53	DMH
Copper	0.002	J	mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:18	05/05/2024 19:53	DMH
Iron	59.8	D1	mg/L	1.00	0.500	SW846 6010 B	04/22/2024 09:18	05/03/2024 21:14	AKB
Lead	ND	U	mg/L	0.002	0.0005	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:13	MRWD
Lithium	0.15	D2	mg/L	0.04	0.01	SW846-6020 A	05/21/2024 08:25	05/21/2024 14:16	MRWD
Magnesium	230	D1	mg/L	20.0	9.00	SW846 6010 B	04/22/2024 09:18	05/03/2024 21:17	AKB
Molybdenum	0.007	J	mg/L	0.01	0.002	SW846-6020 A	04/22/2024 09:18	04/29/2024 22:28	MRWD
Nickel	0.100		mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:18	05/05/2024 19:53	DMH
Potassium	34.7	D1	mg/L	5.00	2.20	SW846 6010 B	04/22/2024 09:18	05/03/2024 21:14	AKB
Selenium	ND	U	mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:13	MRWD
Sodium	192	D1	mg/L	26.0	10.0	SW846 6010 B	04/22/2024 09:18	05/03/2024 21:17	AKB
Thallium	ND	U	mg/L	0.0020	0.0001	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:13	MRWD
Zinc	0.11		mg/L	0.02	0.004	SW846-6020 A	04/22/2024 09:18	05/05/2024 19:53	DMH

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	2.5	J	ng/L	5.0	1.8	EPA 245.7 REV 2	04/29/2024 09:35	04/29/2024 13:48	TML

Conventional Chemistry Analyses Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Bicarbonate Alkalinity as CaCO3	285		mg/L	4	4	2320 B-2011	04/29/2024 18:16	04/29/2024 18:16	HMF
Carbonate Alkalinity as CaCO3	ND	U	mg/L	4		2320 B-2011	04/29/2024 18:16	04/29/2024 18:16	HMF
Total Alkalinity	285		mg/L	4	4	2320 B-2011	04/29/2024 18:16	04/29/2024 18:16	HMF
Chemical Oxygen Demand	36		mg/L	13	8	HACH 8000	04/23/2024 08:18	04/23/2024 15:09	ORK
Specific Conductance (Lab)	4830		umhos/cm	1	1	2510 B-2011	04/22/2024 09:20	04/22/2024 14:15	AED
Hardness as CaCO3	1970	D1, D	mg/L	5	5	2340 C (as HACH 8226)	04/25/2024 07:55	04/25/2024 07:55	CLL
Total Dissolved Solids	3750		mg/L	250	250	2540 C-2015	04/22/2024 18:34	04/22/2024 18:34	HAG
Total Organic Carbon	0.7		mg/L	0.5	0.2	5310 C-2014	04/25/2024 11:08	04/26/2024 00:29	HMF

Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
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Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	0.655	_Sub	pCi/L			EPA 903.1	05/20/2024 08:57	05/20/2024 08:58	RCW
See Attached Subcontract Report	0.991	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	05/20/2024 08:57	05/20/2024 08:58	RCW
See Attached Subcontract Report	1.65	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	05/20/2024 08:57	05/20/2024 08:58	RCW

Ion Chromatography Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Chloride	1250	D	mg/L	10.0	7.2	EPA 300.0 REV 2.1	04/27/2024 00:23	04/27/2024 00:23	CLS3
Fluoride	0.25		mg/L	0.20	0.18	EPA 300.0 REV 2.1	04/26/2024 23:56	04/26/2024 23:56	CLS3
Sulfate	4540	D	mg/L	20.0	1.9	EPA 300.0 REV 2.1	04/27/2024 00:23	04/27/2024 00:23	CLS3



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ANALYTICAL RESULTS

Lab Sample ID: **4042964-10** Sample Collection Date Time: 04/17/2024 09:45
Description: **Mercury Field Blank MW-4D** Sample Received Date Time: 04/19/2024 11:37

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	u	ng/L	5.0	1.8	EPA 245.7 REV 2	04/29/2024 09:35	04/29/2024 15:08	TML



ANALYTICAL RESULTS

Lab Sample ID: 4042964-11

Description: MW5

Sample Collection Date Time: 04/17/2024 07:30

Sample Received Date Time: 04/19/2024 11:37

Metals by SW846 6000 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Antimony	ND	u	mg/L	0.005	0.002	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:17	MRWD
Arsenic	0.0030	M1	mg/L	0.0010	0.0004	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:15	DMH
Barium	0.011		mg/L	0.004	0.001	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:17	MRWD
Beryllium	ND	D2, u	mg/L	0.0040	0.0020	SW846-6020 A	05/21/2024 08:25	05/21/2024 12:28	DMH
Boron	0.86	M1, M2	mg/L	0.10	0.10	SW846 6010 B	04/22/2024 09:18	05/03/2024 21:20	AKB
Cadmium	ND	u	mg/L	0.0010	0.0001	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:17	MRWD
Calcium	642	D1, M3	mg/L	50.0	25.0	SW846 6010 B	04/22/2024 09:18	05/03/2024 21:26	AKB
Chromium	ND	u	mg/L	0.0020	0.0006	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:15	DMH
Cobalt	0.006		mg/L	0.004	0.004	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:15	DMH
Copper	0.002	J	mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:15	DMH
Iron	7.82		mg/L	0.100	0.050	SW846 6010 B	04/22/2024 09:18	05/03/2024 21:20	AKB
Lead	ND	u	mg/L	0.002	0.0005	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:17	MRWD
Lithium	0.04	D2	mg/L	0.04	0.01	SW846-6020 A	05/21/2024 08:25	05/21/2024 14:18	MRWD
Magnesium	306	D1, M3	mg/L	20.0	9.00	SW846 6010 B	04/22/2024 09:18	05/03/2024 21:26	AKB
Molybdenum	0.004	J	mg/L	0.01	0.002	SW846-6020 A	04/22/2024 09:18	04/29/2024 22:32	MRWD
Nickel	0.006		mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:15	DMH
Potassium	9.79		mg/L	0.50	0.22	SW846 6010 B	04/22/2024 09:18	05/03/2024 21:20	AKB
Selenium	ND	u	mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:17	MRWD
Sodium	103	D1, M3	mg/L	26.0	10.0	SW846 6010 B	04/22/2024 09:18	05/03/2024 21:26	AKB
Thallium	ND	u	mg/L	0.0020	0.0001	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:17	MRWD
Zinc	0.01	J	mg/L	0.02	0.004	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:15	DMH

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	u	ng/L	5.0	1.8	EPA 245.7 REV 2	04/29/2024 09:35	04/29/2024 13:54	TML

M2

Conventional Chemistry Analyses Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Bicarbonate Alkalinity as CaCO3	475		mg/L	4	4	2320 B-2011	04/29/2024 18:21	04/29/2024 18:21	HMF
Carbonate Alkalinity as CaCO3	ND	u	mg/L	4		2320 B-2011	04/29/2024 18:21	04/29/2024 18:21	HMF
Total Alkalinity	475	M3	mg/L	4	4	2320 B-2011	04/29/2024 18:21	04/29/2024 18:21	HMF
Chemical Oxygen Demand	23		mg/L	13	8	HACH 8000	04/23/2024 08:18	04/23/2024 15:09	ORK
Specific Conductance (Lab)	4430		umhos/cm	1	1	2510 B-2011	04/22/2024 09:20	04/22/2024 14:15	AED
Hardness as CaCO3	2640	D1, D	mg/L	5	5	2340 C (as HACH 8226)	04/25/2024 07:55	04/25/2024 07:55	CLL
Total Dissolved Solids	3320	Y1	mg/L	250	250	2540 C-2015	04/22/2024 18:34	04/22/2024 18:34	HAG
Total Organic Carbon	2.1		mg/L	0.5	0.2	5310 C-2014	04/25/2024 11:08	04/26/2024 00:52	HMF



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Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	-0.153	_Sub	pCi/L			EPA 903.1	05/20/2024 08:57	05/20/2024 08:58	RCW
See Attached Subcontract Report	1.37	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	05/20/2024 08:57	05/20/2024 08:58	RCW
See Attached Subcontract Report	1.37	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	05/20/2024 08:57	05/20/2024 08:58	RCW

Ion Chromatography Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Chloride	764	D, M2	mg/L	10.0	7.2	EPA 300.0 REV 2.1	04/27/2024 01:18	04/27/2024 01:18	CLS3
Fluoride	ND	M2, Y5, U	mg/L	0.20		EPA 300.0 REV 2.1	04/27/2024 00:51	04/27/2024 00:51	CLS3
Sulfate	4520	D, M2	mg/L	20.0	1.9	EPA 300.0 REV 2.1	04/27/2024 01:18	04/27/2024 01:18	CLS3



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ANALYTICAL RESULTS

Lab Sample ID: 4042964-12

Sample Collection Date Time: 04/17/2024 07:30

Description: Mercury Field Blank MW-5

Sample Received Date Time: 04/19/2024 11:37

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	u	ng/L	5.0	1.8	EPA 245.7 REV 2	04/29/2024 09:35	04/29/2024 14:56	TML



ANALYTICAL RESULTS

Lab Sample ID: **4042964-13**

Sample Collection Date Time: 04/16/2024 13:50

Description: **MW6**

Sample Received Date Time: 04/19/2024 11:37

Metals by SW846 6000 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Antimony	ND	u	mg/L	0.005	0.002	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:20	MRWD
Arsenic	0.0052		mg/L	0.0010	0.0004	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:19	DMH
Barium	0.011		mg/L	0.004	0.001	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:20	MRWD
Beryllium	ND	u, D2	mg/L	0.0040	0.0020	SW846-6020 A	05/21/2024 08:25	05/21/2024 12:31	DMH
Boron	1.37	D1	mg/L	1.00	1.00	SW846 6010 B	04/22/2024 09:18	05/03/2024 21:33	AKB
Cadmium	ND	u	mg/L	0.0010	0.0001	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:20	MRWD
Calcium	525	D1	mg/L	50.0	25.0	SW846 6010 B	04/22/2024 09:18	05/03/2024 21:36	AKB
Chromium	ND	u	mg/L	0.0020	0.0006	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:19	DMH
Cobalt	0.006		mg/L	0.004	0.004	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:19	DMH
Copper	ND	u	mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:19	DMH
Iron	5.93		mg/L	0.100	0.050	SW846 6010 B	04/22/2024 09:18	05/03/2024 21:30	AKB
Lead	ND	u	mg/L	0.002	0.0005	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:20	MRWD
Lithium	0.05	D2	mg/L	0.04	0.01	SW846-6020 A	05/21/2024 08:25	05/21/2024 14:21	MRWD
Magnesium	241	D1	mg/L	20.0	9.00	SW846 6010 B	04/22/2024 09:18	05/03/2024 21:36	AKB
Molybdenum	0.008	J	mg/L	0.01	0.002	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:19	DMH
Nickel	0.015		mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:19	DMH
Potassium	8.10		mg/L	0.50	0.22	SW846 6010 B	04/22/2024 09:18	05/03/2024 21:30	AKB
Selenium	ND	u	mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:20	MRWD
Sodium	39.6	D1	mg/L	2.60	1.00	SW846 6010 B	04/22/2024 09:18	05/03/2024 21:33	AKB
Thallium	ND	u	mg/L	0.0020	0.0001	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:20	MRWD
Zinc	0.01	J	mg/L	0.02	0.004	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:19	DMH

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	u	ng/L	5.0	1.8	EPA 245.7 REV 2	04/29/2024 09:35	04/29/2024 14:00	TML

Conventional Chemistry Analyses Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Bicarbonate Alkalinity as CaCO3	495		mg/L	4	4	2320 B-2011	04/29/2024 18:28	04/29/2024 18:28	HMF
Carbonate Alkalinity as CaCO3	ND	u	mg/L	4		2320 B-2011	04/29/2024 18:28	04/29/2024 18:28	HMF
Total Alkalinity	495		mg/L	4	4	2320 B-2011	04/29/2024 18:28	04/29/2024 18:28	HMF
Chemical Oxygen Demand	13		mg/L	13	8	HACH 8000	04/23/2024 08:18	04/23/2024 15:09	ORK
Specific Conductance (Lab)	3370		umhos/cm	1	1	2510 B-2011	04/22/2024 09:20	04/22/2024 14:15	AED
Hardness as CaCO3	1860	D1, D	mg/L	5	5	2340 C (as HACH 8226)	04/25/2024 07:55	04/25/2024 07:55	CLL
Total Dissolved Solids	2520		mg/L	250	250	2540 C-2015	04/22/2024 18:34	04/22/2024 18:34	HAG
Total Organic Carbon	1.8		mg/L	0.5	0.2	5310 C-2014	04/25/2024 11:08	04/26/2024 01:08	HMF

Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
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Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	0.391	_Sub	pCi/L			EPA 903.1	05/20/2024 08:57	05/20/2024 08:58	RCW
See Attached Subcontract Report	0.554	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	05/20/2024 08:57	05/20/2024 08:58	RCW
See Attached Subcontract Report	0.945	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	05/20/2024 08:57	05/20/2024 08:58	RCW

Ion Chromatography Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Chloride	56.5		mg/L	0.5	0.4	EPA 300.0 REV 2.1	04/26/2024 19:11	04/26/2024 19:11	CLS3
Fluoride	0.23		mg/L	0.20	0.18	EPA 300.0 REV 2.1	04/26/2024 19:11	04/26/2024 19:11	CLS3
Sulfate	4420	D	mg/L	20.0	1.9	EPA 300.0 REV 2.1	04/26/2024 19:36	04/26/2024 19:36	CLS3



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ANALYTICAL RESULTS

Lab Sample ID: 4042964-14
Description: Mercury Field Blank MW-6

Sample Collection Date Time: 04/16/2024 13:50
Sample Received Date Time: 04/19/2024 11:37

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	u	ng/L	5.0	1.8	EPA 245.7 REV 2	04/29/2024 09:35	04/29/2024 15:19	TML



ANALYTICAL RESULTS

Lab Sample ID: **4042964-15**Description: **MW7**

Sample Collection Date Time: 04/16/2024 12:40

Sample Received Date Time: 04/19/2024 11:37

Metals by SW846 6000 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Antimony	ND	u	mg/L	0.005	0.002	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:24	MRWD
Arsenic	0.0036		mg/L	0.0010	0.0004	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:23	DMH
Barium	0.014		mg/L	0.004	0.001	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:24	MRWD
Beryllium	ND	u	mg/L	0.0020	0.0010	SW846-6020 A	04/22/2024 09:18	05/07/2024 11:06	MRWD
Boron	5.23	D1	mg/L	1.00	1.00	SW846 6010 B	04/22/2024 09:18	05/03/2024 21:52	AKB
Cadmium	ND	u	mg/L	0.0010	0.0001	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:24	MRWD
Calcium	453	D1	mg/L	50.0	25.0	SW846 6010 B	04/22/2024 09:18	05/03/2024 21:55	AKB
Chromium	ND	u	mg/L	0.0020	0.0006	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:23	DMH
Cobalt	ND	u	mg/L	0.004	0.004	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:23	DMH
Copper	ND	u	mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:23	DMH
Iron	5.81		mg/L	0.100	0.050	SW846 6010 B	04/22/2024 09:18	05/03/2024 21:49	AKB
Lead	ND	u	mg/L	0.002	0.0005	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:24	MRWD
Lithium	0.04	D2	mg/L	0.04	0.01	SW846-6020 A	05/21/2024 08:25	05/21/2024 14:23	MRWD
Magnesium	163	D1	mg/L	20.0	9.00	SW846 6010 B	04/22/2024 09:18	05/03/2024 21:55	AKB
Molybdenum	0.006	J	mg/L	0.01	0.002	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:23	DMH
Nickel	0.006		mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:23	DMH
Potassium	7.24		mg/L	0.50	0.22	SW846 6010 B	04/22/2024 09:18	05/03/2024 21:49	AKB
Selenium	ND	u	mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:24	MRWD
Sodium	49.0	D1	mg/L	2.60	1.00	SW846 6010 B	04/22/2024 09:18	05/03/2024 21:52	AKB
Thallium	ND	u	mg/L	0.0020	0.0001	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:24	MRWD
Zinc	0.01	J	mg/L	0.02	0.004	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:23	DMH

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	u	ng/L	5.0	1.8	EPA 245.7 REV 2	04/29/2024 09:35	04/29/2024 14:05	TML

Conventional Chemistry Analyses Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Bicarbonate Alkalinity as CaCO3	330		mg/L	4	4	2320 B-2011	04/29/2024 18:36	04/29/2024 18:36	HMF
Carbonate Alkalinity as CaCO3	ND	u	mg/L	4		2320 B-2011	04/29/2024 18:36	04/29/2024 18:36	HMF
Total Alkalinity	330		mg/L	4	4	2320 B-2011	04/29/2024 18:36	04/29/2024 18:36	HMF
Chemical Oxygen Demand	16		mg/L	13	8	HACH 8000	04/23/2024 08:18	04/23/2024 15:09	ORK
Specific Conductance (Lab)	2850		umhos/cm	1	1	2510 B-2011	04/22/2024 09:20	04/22/2024 14:15	AED
Hardness as CaCO3	1620	D1, D	mg/L	5	5	2340 C (as HACH 8226)	04/25/2024 07:55	04/25/2024 07:55	CLL
Total Dissolved Solids	1760	H2	mg/L	25	25	2540 C-2015	05/17/2024 18:57	05/17/2024 18:57	HAG
Total Organic Carbon	1.4		mg/L	0.5	0.2	5310 C-2014	04/25/2024 11:08	04/26/2024 01:26	HMF

Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
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Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	0.522	_Sub	pCi/L			EPA 903.1	05/20/2024 08:57	05/20/2024 08:58	RCW
See Attached Subcontract Report	0.557	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	05/20/2024 08:57	05/20/2024 08:58	RCW
See Attached Subcontract Report	1.08	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	05/20/2024 08:57	05/20/2024 08:58	RCW

Ion Chromatography Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Chloride	389	D	mg/L	10.0	7.2	EPA 300.0 REV 2.1	04/26/2024 20:27	04/26/2024 20:27	CLS3
Fluoride	0.25		mg/L	0.20	0.18	EPA 300.0 REV 2.1	04/26/2024 20:01	04/26/2024 20:01	CLS3
Sulfate	3400	D	mg/L	20.0	1.9	EPA 300.0 REV 2.1	04/26/2024 20:27	04/26/2024 20:27	CLS3



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ANALYTICAL RESULTS

Lab Sample ID: 4042964-16
Description: Mercury Field Blank MW-7

Sample Collection Date Time: 04/16/2024 12:40
Sample Received Date Time: 04/19/2024 11:37

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	u	ng/L	5.0	1.8	EPA 245.7 REV 2	04/29/2024 09:35	04/29/2024 14:51	TML



ANALYTICAL RESULTS

Lab Sample ID: **4042964-17**Description: **MW8**

Sample Collection Date Time: 04/16/2024 12:40

Sample Received Date Time: 04/19/2024 11:37

Metals by SW846 6000 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Antimony	ND	u	mg/L	0.005	0.002	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:28	MRWD
Arsenic	0.0039		mg/L	0.0010	0.0004	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:26	DMH
Barium	0.014		mg/L	0.004	0.001	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:28	MRWD
Beryllium	ND	u	mg/L	0.0020	0.0010	SW846-6020 A	04/22/2024 09:18	05/07/2024 11:10	MRWD
Boron	ND	u	mg/L	0.10	0.10	SW846 6010 B	04/22/2024 09:18	05/03/2024 21:58	AKB
Cadmium	ND	u	mg/L	0.0010	0.0001	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:28	MRWD
Calcium	218	D1	mg/L	50.0	25.0	SW846 6010 B	04/22/2024 09:18	05/03/2024 22:05	AKB
Chromium	0.0008	J	mg/L	0.0020	0.0006	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:26	DMH
Cobalt	ND	u	mg/L	0.004	0.004	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:26	DMH
Copper	0.001	J	mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:26	DMH
Iron	12.9	D1	mg/L	1.00	0.500	SW846 6010 B	04/22/2024 09:18	05/03/2024 22:01	AKB
Lead	ND	u	mg/L	0.002	0.0005	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:28	MRWD
Lithium	0.01	D2, J	mg/L	0.04	0.01	SW846-6020 A	05/21/2024 08:25	05/21/2024 14:25	MRWD
Magnesium	108	D1	mg/L	20.0	9.00	SW846 6010 B	04/22/2024 09:18	05/03/2024 22:05	AKB
Molybdenum	0.01		mg/L	0.01	0.002	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:26	DMH
Nickel	0.003		mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:26	DMH
Potassium	3.12		mg/L	0.50	0.22	SW846 6010 B	04/22/2024 09:18	05/03/2024 21:58	AKB
Selenium	ND	u	mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:28	MRWD
Sodium	37.1	D1	mg/L	2.60	1.00	SW846 6010 B	04/22/2024 09:18	05/03/2024 22:01	AKB
Thallium	ND	u	mg/L	0.0020	0.0001	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:28	MRWD
Zinc	0.02		mg/L	0.02	0.004	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:26	DMH

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	u	ng/L	5.0	1.8	EPA 245.7 REV 2	04/29/2024 09:35	04/29/2024 14:11	TML

Conventional Chemistry Analyses Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Bicarbonate Alkalinity as CaCO3	316		mg/L	4	4	2320 B-2011	04/29/2024 18:42	04/29/2024 18:42	HMF
Carbonate Alkalinity as CaCO3	ND	u	mg/L	4		2320 B-2011	04/29/2024 18:42	04/29/2024 18:42	HMF
Total Alkalinity	316		mg/L	4	4	2320 B-2011	04/29/2024 18:42	04/29/2024 18:42	HMF
Chemical Oxygen Demand	39		mg/L	13	8	HACH 8000	04/23/2024 08:18	04/23/2024 15:09	ORK
Specific Conductance (Lab)	1770		umhos/cm	1	1	2510 B-2011	04/22/2024 09:20	04/22/2024 14:15	AED
Hardness as CaCO3	880	D1, D	mg/L	2	2	2340 C (as HACH 8226)	04/25/2024 07:55	04/25/2024 07:55	CLL
Total Dissolved Solids	1270		mg/L	100	100	2540 C-2015	04/22/2024 18:34	04/22/2024 18:34	HAG
Total Organic Carbon	3.1		mg/L	0.5	0.2	5310 C-2014	04/25/2024 11:08	04/26/2024 01:41	HMF

Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
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Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	0.058	_Sub	pCi/L			EPA 903.1	05/20/2024 08:57	05/20/2024 08:58	RCW
See Attached Subcontract Report	1.12	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	05/20/2024 08:57	05/20/2024 08:58	RCW
See Attached Subcontract Report	1.18	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	05/20/2024 08:57	05/20/2024 08:58	RCW

Ion Chromatography Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Chloride	5.0		mg/L	0.5	0.4	EPA 300.0 REV 2.1	04/26/2024 20:52	04/26/2024 20:52	CLS3
Fluoride	0.29		mg/L	0.20	0.18	EPA 300.0 REV 2.1	04/26/2024 20:52	04/26/2024 20:52	CLS3
Sulfate	1800	D	mg/L	20.0	1.9	EPA 300.0 REV 2.1	04/26/2024 21:18	04/26/2024 21:18	CLS3



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ANALYTICAL RESULTS

Lab Sample ID: 4042964-18
Description: Mercury Field Blank MW-8

Sample Collection Date Time: 04/16/2024 12:40
Sample Received Date Time: 04/19/2024 11:37

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	u	ng/L	5.0	1.8	EPA 245.7 REV 2	04/29/2024 09:35	04/29/2024 15:02	TML



ANALYTICAL RESULTS

Lab Sample ID: 4042964-19

Description: MW10

Sample Collection Date Time: 04/16/2024 09:05

Sample Received Date Time: 04/19/2024 11:37

Metals by SW846 6000 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Antimony	ND	u	mg/L	0.005	0.002	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:31	MRWD
Arsenic	0.0013		mg/L	0.0010	0.0004	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:30	DMH
Barium	0.007		mg/L	0.004	0.001	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:31	MRWD
Beryllium	ND	u	mg/L	0.0020	0.0010	SW846-6020 A	04/22/2024 09:18	05/07/2024 11:14	MRWD
Boron	0.35		mg/L	0.10	0.10	SW846 6010 B	04/22/2024 09:18	05/03/2024 22:08	AKB
Cadmium	0.0001	J	mg/L	0.0010	0.0001	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:31	MRWD
Calcium	410	D1	mg/L	50.0	25.0	SW846 6010 B	04/22/2024 09:18	05/03/2024 22:14	AKB
Chromium	ND	u	mg/L	0.0020	0.0006	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:30	DMH
Cobalt	0.066		mg/L	0.004	0.004	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:30	DMH
Copper	0.002	J	mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:30	DMH
Iron	18.1	D1	mg/L	1.00	0.500	SW846 6010 B	04/22/2024 09:18	05/03/2024 22:11	AKB
Lead	ND	u	mg/L	0.002	0.0005	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:31	MRWD
Lithium	0.01	D2, J	mg/L	0.04	0.01	SW846-6020 A	05/21/2024 08:25	05/21/2024 14:28	MRWD
Magnesium	225	D1	mg/L	20.0	9.00	SW846 6010 B	04/22/2024 09:18	05/03/2024 22:14	AKB
Molybdenum	ND	u	mg/L	0.01	0.002	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:30	DMH
Nickel	0.032		mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:30	DMH
Potassium	3.72		mg/L	0.50	0.22	SW846 6010 B	04/22/2024 09:18	05/03/2024 22:08	AKB
Selenium	ND	u	mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:31	MRWD
Sodium	129	D1	mg/L	26.0	10.0	SW846 6010 B	04/22/2024 09:18	05/03/2024 22:14	AKB
Thallium	ND	u	mg/L	0.0020	0.0001	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:31	MRWD
Zinc	0.02		mg/L	0.02	0.004	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:30	DMH

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	3.4	J	ng/L	5.0	1.8	EPA 245.7 REV 2	04/29/2024 09:35	04/29/2024 14:17	TML

Conventional Chemistry Analyses Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Bicarbonate Alkalinity as CaCO3	164		mg/L	4	4	2320 B-2011	04/29/2024 18:47	04/29/2024 18:47	HMF
Carbonate Alkalinity as CaCO3	ND	u	mg/L	4		2320 B-2011	04/29/2024 18:47	04/29/2024 18:47	HMF
Total Alkalinity	164		mg/L	4	4	2320 B-2011	04/29/2024 18:47	04/29/2024 18:47	HMF
Chemical Oxygen Demand	27		mg/L	13	8	HACH 8000	04/23/2024 08:18	04/23/2024 15:09	ORK
Specific Conductance (Lab)	3650		umhos/cm	1	1	2510 B-2011	04/22/2024 09:20	04/22/2024 14:15	AED
Hardness as CaCO3	1660	D1, D	mg/L	5	5	2340 C (as HACH 8226)	04/25/2024 07:55	04/25/2024 07:55	CLL
Total Dissolved Solids	2540		mg/L	250	250	2540 C-2015	04/23/2024 12:06	04/23/2024 12:06	HAG
Total Organic Carbon	1.3		mg/L	0.5	0.2	5310 C-2014	04/25/2024 11:08	04/26/2024 03:11	HMF

Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
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Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	-0.311	_Sub	pCi/L			EPA 903.1	05/20/2024 08:57	05/20/2024 08:58	RCW
See Attached Subcontract Report	0.298	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	05/20/2024 08:57	05/20/2024 08:58	RCW
See Attached Subcontract Report	0.298	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	05/20/2024 08:57	05/20/2024 08:58	RCW

Ion Chromatography Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Chloride	61.5		mg/L	0.5	0.4	EPA 300.0 REV 2.1	04/26/2024 21:43	04/26/2024 21:43	CLS3
Fluoride	ND	u	mg/L	0.20		EPA 300.0 REV 2.1	04/26/2024 21:43	04/26/2024 21:43	CLS3
Sulfate	2090	A-01, D	mg/L	100	100	EPA 300.0 REV 2.1	04/28/2024 00:21	04/28/2024 00:21	JBP1



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ANALYTICAL RESULTS

Lab Sample ID: 4042964-20
Description: Mercury Field Blank MW-10

Sample Collection Date Time: 04/16/2024 09:05
Sample Received Date Time: 04/19/2024 11:37

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	u	ng/L	5.0	1.8	EPA 245.7 REV 2	04/29/2024 09:35	04/29/2024 15:13	TML



ANALYTICAL RESULTS

Lab Sample ID: **4042964-21**

Sample Collection Date Time: 04/17/2024 07:45

Description: **MW-10D**

Sample Received Date Time: 04/19/2024 11:37

Metals by SW846 6000 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Antimony	ND	u	mg/L	0.005	0.002	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:53	MRWD
Arsenic	0.0025		mg/L	0.0010	0.0004	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:34	DMH
Barium	0.016		mg/L	0.004	0.001	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:53	MRWD
Beryllium	ND	u	mg/L	0.0040	0.0020	SW846-6020 A	04/22/2024 09:18	05/07/2024 11:17	MRWD
Boron	2.73	D1	mg/L	1.00	1.00	SW846 6010 B	04/22/2024 09:18	05/03/2024 22:30	AKB
Cadmium	ND	u	mg/L	0.0010	0.0001	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:53	MRWD
Calcium	562	D1	mg/L	50.0	25.0	SW846 6010 B	04/22/2024 09:18	05/03/2024 22:33	AKB
Chromium	ND	u	mg/L	0.0020	0.0006	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:34	DMH
Cobalt	0.009		mg/L	0.004	0.004	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:34	DMH
Copper	0.001	J	mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:34	DMH
Iron	17.1	D1	mg/L	1.00	0.500	SW846 6010 B	04/22/2024 09:18	05/03/2024 22:30	AKB
Lead	ND	u	mg/L	0.002	0.0005	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:53	MRWD
Lithium	0.08	D2	mg/L	0.04	0.01	SW846-6020 A	05/21/2024 08:25	05/21/2024 14:30	MRWD
Magnesium	147	D1	mg/L	20.0	9.00	SW846 6010 B	04/22/2024 09:18	05/03/2024 22:33	AKB
Molybdenum	0.004	J	mg/L	0.01	0.002	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:34	DMH
Nickel	0.020		mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:34	DMH
Potassium	11.8	D1	mg/L	5.00	2.20	SW846 6010 B	04/22/2024 09:18	05/03/2024 22:30	AKB
Selenium	ND	u	mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:34	DMH
Sodium	96.0	D1	mg/L	2.60	1.00	SW846 6010 B	04/22/2024 09:18	05/03/2024 22:30	AKB
Thallium	ND	u	mg/L	0.0020	0.0001	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:53	MRWD
Zinc	0.02		mg/L	0.02	0.004	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:34	DMH

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	u	ng/L	5.0	1.8	EPA 245.7 REV 2	04/29/2024 09:35	04/29/2024 14:22	TML

Conventional Chemistry Analyses Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Bicarbonate Alkalinity as CaCO ₃	201		mg/L	4	4	2320 B-2011	04/29/2024 19:21	04/29/2024 19:21	HMF
Carbonate Alkalinity as CaCO ₃	ND	u	mg/L	4		2320 B-2011	04/29/2024 19:21	04/29/2024 19:21	HMF
Total Alkalinity	201		mg/L	4	4	2320 B-2011	04/29/2024 19:21	04/29/2024 19:21	HMF
Chemical Oxygen Demand	12	J	mg/L	13	8	HACH 8000	04/23/2024 08:18	04/23/2024 15:09	ORK
Specific Conductance (Lab)	3370		umhos/cm	1	1	2510 B-2011	04/22/2024 09:20	04/22/2024 14:15	AED
Hardness as CaCO ₃	1950	D1, D	mg/L	5	5	2340 C (as HACH 8226)	04/25/2024 07:55	04/25/2024 07:55	CLL
Total Dissolved Solids	2330		mg/L	250	250	2540 C-2015	04/23/2024 12:06	04/23/2024 12:06	HAG
Total Organic Carbon	0.9		mg/L	0.5	0.2	5310 C-2014	04/25/2024 11:08	04/26/2024 03:31	HMF

Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
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Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	0.540	_Sub	pCi/L			EPA 903.1	05/20/2024 08:57	05/20/2024 08:58	RCW
See Attached Subcontract Report	1.31	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	05/20/2024 08:57	05/20/2024 08:58	RCW
See Attached Subcontract Report	1.85	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	05/20/2024 08:57	05/20/2024 08:58	RCW

Ion Chromatography Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Chloride	419	D	mg/L	10.0	7.2	EPA 300.0 REV 2.1	04/26/2024 22:59	04/26/2024 22:59	CLS3
Fluoride	0.38		mg/L	0.20	0.18	EPA 300.0 REV 2.1	04/26/2024 22:34	04/26/2024 22:34	CLS3
Sulfate	4080	D	mg/L	20.0	1.9	EPA 300.0 REV 2.1	04/26/2024 22:59	04/26/2024 22:59	CLS3



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ANALYTICAL RESULTS

Lab Sample ID: 4042964-22
Description: Mercury Field Blank MW-10D

Sample Collection Date Time: 04/17/2024 07:45
Sample Received Date Time: 04/19/2024 11:37

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	u	ng/L	5.0	1.8	EPA 245.7 REV 2	04/29/2024 09:35	04/29/2024 15:25	TML



ANALYTICAL RESULTS

Lab Sample ID: **4042964-23**Description: **MW102**

Sample Collection Date Time: 04/16/2024 10:50

Sample Received Date Time: 04/19/2024 11:37

Metals by SW846 6000 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Antimony	ND	U	mg/L	0.005	0.002	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:57	MRWD
Arsenic	0.0041		mg/L	0.0010	0.0004	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:37	DMH
Barium	0.042		mg/L	0.004	0.001	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:57	MRWD
Beryllium	ND	U	mg/L	0.0040	0.0020	SW846-6020 A	04/22/2024 09:18	05/07/2024 11:21	MRWD
Boron	ND	U	mg/L	0.10	0.10	SW846 6010 B	04/22/2024 09:18	05/03/2024 22:37	AKB
Cadmium	0.0003	J	mg/L	0.0010	0.0001	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:57	MRWD
Calcium	93.3	D1	mg/L	50.0	25.0	SW846 6010 B	04/22/2024 09:18	05/03/2024 22:43	AKB
Chromium	0.0007	J	mg/L	0.0020	0.0006	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:37	DMH
Cobalt	ND	U	mg/L	0.004	0.004	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:37	DMH
Copper	ND	U	mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:37	DMH
Iron	4.93		mg/L	0.100	0.050	SW846 6010 B	04/22/2024 09:18	05/03/2024 22:37	AKB
Lead	0.0007	J	mg/L	0.002	0.0005	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:57	MRWD
Lithium	ND	D2, V1, U	mg/L	0.04	0.01	SW846-6020 A	05/21/2024 08:25	05/21/2024 14:51	MRWD
Magnesium	52.3	D1	mg/L	2.00	0.900	SW846 6010 B	04/22/2024 09:18	05/03/2024 22:40	AKB
Molybdenum	ND	U	mg/L	0.01	0.002	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:37	DMH
Nickel	0.003		mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:37	DMH
Potassium	1.07		mg/L	0.50	0.22	SW846 6010 B	04/22/2024 09:18	05/03/2024 22:37	AKB
Selenium	ND	U	mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:57	MRWD
Sodium	133	D1	mg/L	26.0	10.0	SW846 6010 B	04/22/2024 09:18	05/03/2024 22:43	AKB
Thallium	0.0004	J	mg/L	0.0020	0.0001	SW846-6020 A	04/22/2024 09:18	04/28/2024 23:57	MRWD
Zinc	0.007	J	mg/L	0.02	0.004	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:37	DMH

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	2.4	J	ng/L	5.0	1.8	EPA 245.7 REV 2	04/29/2024 09:35	04/29/2024 14:39	TML

Conventional Chemistry Analyses Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Bicarbonate Alkalinity as CaCO3	292		mg/L	4	4	2320 B-2011	04/29/2024 19:25	04/29/2024 19:25	HMF
Carbonate Alkalinity as CaCO3	ND	U	mg/L	4		2320 B-2011	04/29/2024 19:25	04/29/2024 19:25	HMF
Total Alkalinity	292		mg/L	4	4	2320 B-2011	04/29/2024 19:25	04/29/2024 19:25	HMF
Chemical Oxygen Demand	21		mg/L	13	8	HACH 8000	04/23/2024 08:27	04/23/2024 15:09	ORK
Specific Conductance (Lab)	1320		umhos/cm	1	1	2510 B-2011	04/22/2024 09:20	04/22/2024 14:15	AED
Hardness as CaCO3	353		mg/L	1	1	2340 C (as HACH 8226)	04/25/2024 07:55	04/25/2024 07:55	CLL
Total Dissolved Solids	1060		mg/L	100	100	2540 C-2015	04/23/2024 12:06	04/23/2024 12:06	HAG
Total Organic Carbon	1.1		mg/L	0.5	0.2	5310 C-2014	04/25/2024 11:10	04/26/2024 08:19	HMF

Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
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Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	0.536	_Sub	pCi/L			EPA 903.1	05/20/2024 08:57	05/20/2024 08:58	RCW
See Attached Subcontract Report	0.727	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	05/20/2024 08:57	05/20/2024 08:58	RCW
See Attached Subcontract Report	1.26	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	05/20/2024 08:57	05/20/2024 08:58	RCW

Ion Chromatography Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Chloride	34.0		mg/L	0.5	0.4	EPA 300.0 REV 2.1	04/27/2024 00:16	04/27/2024 00:16	CLS3
Fluoride	0.32		mg/L	0.20	0.18	EPA 300.0 REV 2.1	04/27/2024 00:16	04/27/2024 00:16	CLS3
Sulfate	836	D	mg/L	20.0	1.9	EPA 300.0 REV 2.1	04/27/2024 00:41	04/27/2024 00:41	CLS3



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ANALYTICAL RESULTS

Lab Sample ID: 4042964-24
Description: Mercury Field Blank MW-102

Sample Collection Date Time: 04/16/2024 10:50
Sample Received Date Time: 04/19/2024 11:37

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	u	ng/L	5.0	1.8	EPA 245.7 REV 2	04/29/2024 09:35	04/29/2024 15:30	TML



ANALYTICAL RESULTS

Lab Sample ID: 4042964-25

Description: MW104

Sample Collection Date Time: 04/16/2024 14:35

Sample Received Date Time: 04/19/2024 11:37

Metals by SW846 6000 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Antimony	ND	u	mg/L	0.005	0.002	SW846-6020 A	04/22/2024 09:18	04/29/2024 00:01	MRWD
Arsenic	0.0004	J	mg/L	0.0010	0.0004	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:41	DMH
Barium	0.028		mg/L	0.004	0.001	SW846-6020 A	04/22/2024 09:18	04/29/2024 00:01	MRWD
Beryllium	ND	u	mg/L	0.0040	0.0020	SW846-6020 A	04/22/2024 09:18	05/07/2024 11:25	MRWD
Boron	ND	u	mg/L	0.10	0.10	SW846 6010 B	04/22/2024 09:18	05/03/2024 22:46	AKB
Cadmium	ND	u	mg/L	0.0010	0.0001	SW846-6020 A	04/22/2024 09:18	04/29/2024 00:01	MRWD
Calcium	288	D1	mg/L	50.0	25.0	SW846 6010 B	04/22/2024 09:18	05/03/2024 22:52	AKB
Chromium	ND	u	mg/L	0.0020	0.0006	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:41	DMH
Cobalt	ND	u	mg/L	0.004	0.004	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:41	DMH
Copper	0.005		mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:41	DMH
Iron	1.09		mg/L	0.100	0.050	SW846 6010 B	04/22/2024 09:18	05/03/2024 22:46	AKB
Lead	ND	u	mg/L	0.002	0.0005	SW846-6020 A	04/22/2024 09:18	04/29/2024 00:01	MRWD
Lithium	0.03	D2, V1, J	mg/L	0.04	0.01	SW846-6020 A	05/21/2024 08:25	05/21/2024 14:46	MRWD
Magnesium	93.2	D1	mg/L	2.00	0.900	SW846 6010 B	04/22/2024 09:18	05/03/2024 22:49	AKB
Molybdenum	ND	u	mg/L	0.01	0.002	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:41	DMH
Nickel	0.003		mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:41	DMH
Potassium	2.55		mg/L	0.50	0.22	SW846 6010 B	04/22/2024 09:18	05/03/2024 22:46	AKB
Selenium	ND	u	mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:18	04/29/2024 00:01	MRWD
Sodium	79.1	D1	mg/L	2.60	1.00	SW846 6010 B	04/22/2024 09:18	05/03/2024 22:49	AKB
Thallium	ND	u	mg/L	0.0020	0.0001	SW846-6020 A	04/22/2024 09:18	04/29/2024 00:01	MRWD
Zinc	0.01	J	mg/L	0.02	0.004	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:41	DMH

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	14.5		ng/L	5.0	1.8	EPA 245.7 REV 2	04/30/2024 09:18	04/30/2024 12:43	TML

M2

Conventional Chemistry Analyses Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Bicarbonate Alkalinity as CaCO3	407		mg/L	4	4	2320 B-2011	04/29/2024 19:31	04/29/2024 19:31	HMF
Carbonate Alkalinity as CaCO3	ND	u	mg/L	4		2320 B-2011	04/29/2024 19:31	04/29/2024 19:31	HMF
Total Alkalinity	407		mg/L	4	4	2320 B-2011	04/29/2024 19:31	04/29/2024 19:31	HMF
Chemical Oxygen Demand	13		mg/L	13	8	HACH 8000	04/23/2024 08:27	04/23/2024 15:09	ORK
Specific Conductance (Lab)	2110		umhos/cm	1	1	2510 B-2011	04/22/2024 09:20	04/22/2024 14:15	AED
Hardness as CaCO3	1060	D1, D	mg/L	2	2	2340 C (as HACH 8226)	04/25/2024 07:55	04/25/2024 07:55	CLL
Total Dissolved Solids	1150		mg/L	250	250	2540 C-2015	04/23/2024 12:06	04/23/2024 12:06	HAG
Total Organic Carbon	0.8		mg/L	0.5	0.2	5310 C-2014	04/25/2024 11:10	04/26/2024 08:32	HMF

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Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	0.189	_Sub	pCi/L			EPA 903.1	05/20/2024 08:57	05/20/2024 08:58	RCW
See Attached Subcontract Report	1.22	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	05/20/2024 08:57	05/20/2024 08:58	RCW
See Attached Subcontract Report	1.41	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	05/20/2024 08:57	05/20/2024 08:58	RCW

Ion Chromatography Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Chloride	12.4		mg/L	0.5	0.4	EPA 300.0 REV 2.1	04/27/2024 01:06	04/27/2024 01:06	CLS3
Fluoride	ND	u	mg/L	0.20		EPA 300.0 REV 2.1	04/27/2024 01:06	04/27/2024 01:06	CLS3
Sulfate	1920	D	mg/L	20.0	1.9	EPA 300.0 REV 2.1	04/27/2024 01:32	04/27/2024 01:32	CLS3



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ANALYTICAL RESULTS

Lab Sample ID: 4042964-26
Description: Mercury Field Blank MW-104

Sample Collection Date Time: 04/16/2024 14:35
Sample Received Date Time: 04/19/2024 11:37

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	u	ng/L	5.0	1.8	EPA 245.7 REV 2	04/30/2024 09:18	04/30/2024 13:45	TML



ANALYTICAL RESULTS

Lab Sample ID: 4042964-27

Sample Collection Date Time: 04/16/2024 07:40

Description: MW-105R

Sample Received Date Time: 04/19/2024 11:37

Metals by SW846 6000 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Antimony	ND	u	mg/L	0.005	0.002	SW846-6020 A	04/22/2024 09:18	04/29/2024 00:05	MRWD
Arsenic	0.0016		mg/L	0.0010	0.0004	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:45	DMH
Barium	0.021		mg/L	0.004	0.001	SW846-6020 A	04/22/2024 09:18	04/29/2024 00:05	MRWD
Beryllium	ND	u, D2	mg/L	0.0040	0.0020	SW846-6020 A	04/22/2024 09:18	05/07/2024 11:28	MRWD
Boron	ND	u	mg/L	0.10	0.10	SW846 6010 B	04/22/2024 09:18	05/03/2024 23:05	AKB
Cadmium	ND	u	mg/L	0.0010	0.0001	SW846-6020 A	04/22/2024 09:18	04/29/2024 00:05	MRWD
Calcium	198	D1	mg/L	50.0	25.0	SW846 6010 B	04/22/2024 09:18	05/03/2024 23:12	AKB
Chromium	ND	u	mg/L	0.0020	0.0006	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:45	DMH
Cobalt	ND	u	mg/L	0.004	0.004	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:45	DMH
Copper	0.030		mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:45	DMH
Iron	2.58		mg/L	0.100	0.050	SW846 6010 B	04/22/2024 09:18	05/03/2024 23:05	AKB
Lead	0.002		mg/L	0.002	0.0005	SW846-6020 A	04/22/2024 09:18	04/29/2024 00:05	MRWD
Lithium	0.03	D2, M2, V1, J	mg/L	0.04	0.01	SW846-6020 A	05/21/2024 08:25	05/21/2024 14:49	MRWD
Magnesium	61.6	D1	mg/L	2.00	0.900	SW846 6010 B	04/22/2024 09:18	05/03/2024 23:08	AKB
Molybdenum	ND	u	mg/L	0.01	0.002	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:45	DMH
Nickel	0.008		mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:45	DMH
Potassium	2.03		mg/L	0.50	0.22	SW846 6010 B	04/22/2024 09:18	05/03/2024 23:05	AKB
Selenium	ND	u	mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:45	DMH
Sodium	37.2	D1	mg/L	2.60	1.00	SW846 6010 B	04/22/2024 09:18	05/03/2024 23:08	AKB
Thallium	ND	u	mg/L	0.0020	0.0001	SW846-6020 A	04/22/2024 09:18	04/29/2024 00:05	MRWD
Zinc	0.06		mg/L	0.02	0.004	SW846-6020 A	04/22/2024 09:18	05/05/2024 20:45	DMH

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	3.8	J	ng/L	5.0	1.8	EPA 245.7 REV 2	04/30/2024 09:18	04/30/2024 12:48	TML

Conventional Chemistry Analyses Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Bicarbonate Alkalinity as CaCO3	391		mg/L	4	4	2320 B-2011	04/29/2024 19:37	04/29/2024 19:37	HMF
Carbonate Alkalinity as CaCO3	ND	u	mg/L	4		2320 B-2011	04/29/2024 19:37	04/29/2024 19:37	HMF
Total Alkalinity	391		mg/L	4	4	2320 B-2011	04/29/2024 19:37	04/29/2024 19:37	HMF
Chemical Oxygen Demand	ND	u	mg/L	13	8	HACH 8000	04/23/2024 08:27	04/23/2024 15:09	ORK
Specific Conductance (Lab)	1410		umhos/cm	1	1	2510 B-2011	04/22/2024 09:20	04/22/2024 14:15	AED
Hardness as CaCO3	745	D1, D	mg/L	2	2	2340 C (as HACH 8226)	04/25/2024 07:55	04/25/2024 07:55	CLL
Total Dissolved Solids	1010		mg/L	100	100	2540 C-2015	04/23/2024 12:06	04/23/2024 12:06	HAG
Total Organic Carbon	0.8		mg/L	0.5	0.2	5310 C-2014	04/25/2024 11:10	04/26/2024 08:46	HMF



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Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	0.981	_Sub	pCi/L			EPA 903.1	05/20/2024 08:57	05/20/2024 08:58	RCW
See Attached Subcontract Report	1.55	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	05/20/2024 08:57	05/20/2024 08:58	RCW
See Attached Subcontract Report	2.53	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	05/20/2024 08:57	05/20/2024 08:58	RCW

Ion Chromatography Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Chloride	11.8		mg/L	0.5	0.4	EPA 300.0 REV 2.1	04/27/2024 01:57	04/27/2024 01:57	CLS3
Fluoride	0.21		mg/L	0.20	0.18	EPA 300.0 REV 2.1	04/27/2024 01:57	04/27/2024 01:57	CLS3
Sulfate	899	D	mg/L	20.0	1.9	EPA 300.0 REV 2.1	04/27/2024 02:23	04/27/2024 02:23	CLS3



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ANALYTICAL RESULTS

Lab Sample ID: 4042964-28
Description: Mercury Field Blank MW-105R

Sample Collection Date Time: 04/16/2024 07:40
Sample Received Date Time: 04/19/2024 11:37

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	u	ng/L	5.0	1.8	EPA 245.7 REV 2	04/30/2024 09:18	04/30/2024 14:08	TML



ANALYTICAL RESULTS

Lab Sample ID: **4042964-29**

Sample Collection Date Time: 04/16/2024 07:20

Description: **MW110**

Sample Received Date Time: 04/19/2024 11:37

Metals by SW846 6000 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Antimony	0.003	J	mg/L	0.005	0.002	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:34	MRWD
Arsenic	0.0062		mg/L	0.0010	0.0004	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:34	MRWD
Barium	0.076		mg/L	0.004	0.001	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:34	MRWD
Beryllium	ND	u	mg/L	0.0020	0.0010	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:34	MRWD
Boron	ND	u	mg/L	0.10	0.10	SW846 6010 B	04/22/2024 09:20	04/29/2024 19:54	AKB
Cadmium	ND	u	mg/L	0.0010	0.0001	SW846-6020 A	04/22/2024 09:20	04/29/2024 20:46	MRWD
Calcium	47.1	D1	mg/L	5.00	2.50	SW846 6010 B	04/22/2024 09:20	04/29/2024 19:57	AKB
Chromium	ND	u	mg/L	0.0020	0.0006	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:34	MRWD
Cobalt	ND	u	mg/L	0.004	0.004	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:34	MRWD
Copper	0.001	J	mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:34	MRWD
Iron	7.85		mg/L	0.100	0.050	SW846 6010 B	04/22/2024 09:20	04/29/2024 19:54	AKB
Lead	ND	u	mg/L	0.002	0.0005	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:34	MRWD
Lithium	ND	u	mg/L	0.02	0.005	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:34	MRWD
Magnesium	25.8	D1	mg/L	2.00	0.900	SW846 6010 B	04/22/2024 09:20	04/29/2024 19:57	AKB
Molybdenum	ND	u	mg/L	0.01	0.002	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:34	MRWD
Nickel	ND	u	mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:34	MRWD
Potassium	0.50		mg/L	0.50	0.22	SW846 6010 B	04/22/2024 09:20	04/29/2024 19:54	AKB
Selenium	ND	u	mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:34	MRWD
Sodium	31.4	C6, D1	mg/L	2.60	1.00	SW846 6010 B	04/22/2024 09:20	04/30/2024 14:29	AKB
Thallium	ND	u	mg/L	0.0020	0.0001	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:34	MRWD
Zinc	0.009	J	mg/L	0.02	0.004	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:34	MRWD

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	u	ng/L	5.0	1.8	EPA 245.7 REV 2	04/30/2024 09:18	04/30/2024 12:54	TML

Conventional Chemistry Analyses Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Bicarbonate Alkalinity as CaCO3	151		mg/L	4	4	2320 B-2011	04/29/2024 19:43	04/29/2024 19:43	HMF
Carbonate Alkalinity as CaCO3	ND	u	mg/L	4		2320 B-2011	04/29/2024 19:43	04/29/2024 19:43	HMF
Total Alkalinity	151		mg/L	4	4	2320 B-2011	04/29/2024 19:43	04/29/2024 19:43	HMF
Chemical Oxygen Demand	13		mg/L	13	8	HACH 8000	04/23/2024 08:27	04/23/2024 15:09	ORK
Specific Conductance (Lab)	544		umhos/cm	1	1	2510 B-2011	04/22/2024 09:20	04/22/2024 14:15	AED
Hardness as CaCO3	175		mg/L	1	1	2340 C (as HACH 8226)	04/25/2024 07:55	04/25/2024 07:55	CLL
Total Dissolved Solids	316		mg/L	50	50	2540 C-2015	04/23/2024 12:06	04/23/2024 12:06	HAG
Total Organic Carbon	2.1		mg/L	0.5	0.2	5310 C-2014	04/25/2024 11:10	04/26/2024 09:00	HMF

Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
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Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	0.937	_Sub	pCi/L			EPA 903.1	05/20/2024 08:57	05/20/2024 08:58	RCW
See Attached Subcontract Report	0.602	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	05/20/2024 08:57	05/20/2024 08:58	RCW
See Attached Subcontract Report	1.54	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	05/20/2024 08:57	05/20/2024 08:58	RCW

Ion Chromatography Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Chloride	11.7		mg/L	0.5	0.4	EPA 300.0 REV 2.1	04/29/2024 18:40	04/29/2024 18:40	CLS3
Fluoride	0.28		mg/L	0.20	0.18	EPA 300.0 REV 2.1	04/29/2024 18:40	04/29/2024 18:40	CLS3
Sulfate	82.5		mg/L	1.0	0.09	EPA 300.0 REV 2.1	04/29/2024 18:40	04/29/2024 18:40	CLS3



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ANALYTICAL RESULTS

Lab Sample ID: 4042964-30
Description: Mercury Field Blank MW-110

Sample Collection Date Time: 04/16/2024 07:20
Sample Received Date Time: 04/19/2024 11:37

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	u	ng/L	5.0	1.8	EPA 245.7 REV 2	04/30/2024 09:18	04/30/2024 13:56	TML



ANALYTICAL RESULTS

Lab Sample ID: **4042964-31**Description: **MW-111**

Sample Collection Date Time: 04/16/2024 09:25

Sample Received Date Time: 04/19/2024 11:37

Metals by SW846 6000 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Antimony	0.003	J	mg/L	0.005	0.002	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:37	MRWD
Arsenic	0.0024		mg/L	0.0010	0.0004	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:37	MRWD
Barium	0.018		mg/L	0.004	0.001	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:37	MRWD
Beryllium	ND	u	mg/L	0.0020	0.0010	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:37	MRWD
Boron	0.22		mg/L	0.10	0.10	SW846 6010 B	04/22/2024 09:20	04/29/2024 20:03	AKB
Cadmium	ND	u	mg/L	0.0010	0.0001	SW846-6020 A	04/22/2024 09:20	04/29/2024 20:49	MRWD
Calcium	532	D1	mg/L	50.0	25.0	SW846 6010 B	04/22/2024 09:20	04/29/2024 20:10	AKB
Chromium	ND	u	mg/L	0.0020	0.0006	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:37	MRWD
Cobalt	0.012		mg/L	0.004	0.004	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:37	MRWD
Copper	ND	u	mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:37	MRWD
Iron	9.48		mg/L	0.100	0.050	SW846 6010 B	04/22/2024 09:20	04/29/2024 20:03	AKB
Lead	ND	u	mg/L	0.002	0.0005	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:37	MRWD
Lithium	0.04		mg/L	0.02	0.005	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:37	MRWD
Magnesium	267	D1	mg/L	20.0	9.00	SW846 6010 B	04/22/2024 09:20	04/29/2024 20:10	AKB
Molybdenum	0.003	J	mg/L	0.01	0.002	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:37	MRWD
Nickel	0.014		mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:37	MRWD
Potassium	7.06		mg/L	0.50	0.22	SW846 6010 B	04/22/2024 09:20	04/29/2024 20:03	AKB
Selenium	ND	u	mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:37	MRWD
Sodium	73.7	C6, D1	mg/L	2.60	1.00	SW846 6010 B	04/22/2024 09:20	04/30/2024 14:33	AKB
Thallium	ND	u	mg/L	0.0020	0.0001	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:37	MRWD
Zinc	0.01	J	mg/L	0.02	0.004	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:37	MRWD

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	u	ng/L	5.0	1.8	EPA 245.7 REV 2	04/30/2024 09:18	04/30/2024 13:00	TML

Conventional Chemistry Analyses Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Bicarbonate Alkalinity as CaCO3	608		mg/L	4	4	2320 B-2011	04/29/2024 19:47	04/29/2024 19:47	HMF
Carbonate Alkalinity as CaCO3	ND	u	mg/L	4		2320 B-2011	04/29/2024 19:47	04/29/2024 19:47	HMF
Total Alkalinity	608		mg/L	4	4	2320 B-2011	04/29/2024 19:47	04/29/2024 19:47	HMF
Chemical Oxygen Demand	18		mg/L	13	8	HACH 8000	04/23/2024 08:27	04/23/2024 15:09	ORK
Specific Conductance (Lab)	3700		umhos/cm	1	1	2510 B-2011	04/22/2024 09:20	04/22/2024 14:15	AED
Hardness as CaCO3	2370	D1, D	mg/L	5	5	2340 C (as HACH 8226)	04/25/2024 07:55	04/25/2024 07:55	CLL
Total Dissolved Solids	3330		mg/L	250	250	2540 C-2015	04/23/2024 12:06	04/23/2024 12:06	HAG
Total Organic Carbon	2.7		mg/L	0.5	0.2	5310 C-2014	04/25/2024 11:10	04/26/2024 09:15	HMF

Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
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Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	-0.119	_Sub	pCi/L			EPA 903.1	05/20/2024 08:57	05/20/2024 08:58	RCW
See Attached Subcontract Report	1.12	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	05/20/2024 08:57	05/20/2024 08:58	RCW
See Attached Subcontract Report	1.12	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	05/20/2024 08:57	05/20/2024 08:58	RCW

Ion Chromatography Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Chloride	3.9		mg/L	0.5	0.4	EPA 300.0 REV 2.1	04/29/2024 19:35	04/29/2024 19:35	CLS3
Fluoride	0.28		mg/L	0.20	0.18	EPA 300.0 REV 2.1	04/29/2024 19:35	04/29/2024 19:35	CLS3
Sulfate	4500	D	mg/L	20.0	1.9	EPA 300.0 REV 2.1	04/29/2024 20:03	04/29/2024 20:03	CLS3



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ANALYTICAL RESULTS

Lab Sample ID: 4042964-32
Description: Mercury Field Blank MW-111

Sample Collection Date Time: 04/16/2024 09:25
Sample Received Date Time: 04/19/2024 11:37

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	u	ng/L	5.0	1.8	EPA 245.7 REV 2	04/30/2024 09:18	04/30/2024 13:39	TML



ANALYTICAL RESULTS

Lab Sample ID: **4042964-33**Description: **MW-112**

Sample Collection Date Time: 04/16/2024 09:15

Sample Received Date Time: 04/19/2024 11:37

Metals by SW846 6000 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Antimony	0.003	J	mg/L	0.005	0.002	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:41	MRWD
Arsenic	0.0017		mg/L	0.0010	0.0004	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:41	MRWD
Barium	0.024		mg/L	0.004	0.001	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:41	MRWD
Beryllium	ND	u	mg/L	0.0020	0.0010	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:41	MRWD
Boron	0.12		mg/L	0.10	0.10	SW846 6010 B	04/22/2024 09:20	04/29/2024 20:13	AKB
Cadmium	ND	u	mg/L	0.0010	0.0001	SW846-6020 A	04/22/2024 09:20	04/29/2024 20:53	MRWD
Calcium	223	D1	mg/L	50.0	25.0	SW846 6010 B	04/22/2024 09:20	04/29/2024 20:19	AKB
Chromium	ND	u	mg/L	0.0020	0.0006	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:41	MRWD
Cobalt	0.005		mg/L	0.004	0.004	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:41	MRWD
Copper	ND	u	mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:41	MRWD
Iron	1.53		mg/L	0.100	0.050	SW846 6010 B	04/22/2024 09:20	04/29/2024 20:13	AKB
Lead	ND	u	mg/L	0.002	0.0005	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:41	MRWD
Lithium	0.01	J	mg/L	0.02	0.005	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:41	MRWD
Magnesium	65.9	D1	mg/L	2.00	0.900	SW846 6010 B	04/22/2024 09:20	04/29/2024 20:16	AKB
Molybdenum	0.002	J	mg/L	0.01	0.002	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:41	MRWD
Nickel	0.007		mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:41	MRWD
Potassium	3.83		mg/L	0.50	0.22	SW846 6010 B	04/22/2024 09:20	04/29/2024 20:13	AKB
Selenium	ND	u	mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:41	MRWD
Sodium	11.2	C6, D1	mg/L	2.60	1.00	SW846 6010 B	04/22/2024 09:20	04/30/2024 14:36	AKB
Thallium	ND	u	mg/L	0.0020	0.0001	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:41	MRWD
Zinc	0.005	J	mg/L	0.02	0.004	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:41	MRWD

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	u	ng/L	5.0	1.8	EPA 245.7 REV 2	04/30/2024 09:18	04/30/2024 13:05	TML

Conventional Chemistry Analyses Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Bicarbonate Alkalinity as CaCO3	353		mg/L	4	4	2320 B-2011	04/29/2024 19:56	04/29/2024 19:56	HMF
Carbonate Alkalinity as CaCO3	ND	u	mg/L	4		2320 B-2011	04/29/2024 19:56	04/29/2024 19:56	HMF
Total Alkalinity	353		mg/L	4	4	2320 B-2011	04/29/2024 19:56	04/29/2024 19:56	HMF
Chemical Oxygen Demand	25		mg/L	13	8	HACH 8000	04/23/2024 08:27	04/23/2024 15:09	ORK
Specific Conductance (Lab)	1470		umhos/cm	1	1	2510 B-2011	04/22/2024 09:20	04/22/2024 14:15	AED
Hardness as CaCO3	808	D1, D	mg/L	2	2	2340 C (as HACH 8226)	04/25/2024 07:55	04/25/2024 07:55	CLL
Total Dissolved Solids	988		mg/L	100	100	2540 C-2015	04/23/2024 12:06	04/23/2024 12:06	HAG
Total Organic Carbon	2.6		mg/L	0.5	0.2	5310 C-2014	04/25/2024 11:10	04/26/2024 09:30	HMF

Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
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Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	-0.059	_Sub	pCi/L			EPA 903.1	05/20/2024 08:57	05/20/2024 08:58	RCW
See Attached Subcontract Report	0.769	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	05/20/2024 08:57	05/20/2024 08:58	RCW
See Attached Subcontract Report	0.769	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	05/20/2024 08:57	05/20/2024 08:58	RCW

Ion Chromatography Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Chloride	3.1		mg/L	0.5	0.4	EPA 300.0 REV 2.1	04/29/2024 20:30	04/29/2024 20:30	CLS3
Fluoride	0.20		mg/L	0.20	0.18	EPA 300.0 REV 2.1	04/29/2024 20:30	04/29/2024 20:30	CLS3
Sulfate	1000	D	mg/L	20.0	1.9	EPA 300.0 REV 2.1	04/29/2024 20:57	04/29/2024 20:57	CLS3



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ANALYTICAL RESULTS

Lab Sample ID: 4042964-34
Description: Mercury Field Blank MW-112

Sample Collection Date Time: 04/16/2024 09:15
Sample Received Date Time: 04/19/2024 11:37

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	u	ng/L	5.0	1.8	EPA 245.7 REV 2	04/30/2024 09:18	04/30/2024 13:51	TML



ANALYTICAL RESULTS

Lab Sample ID: **4042964-35**

Sample Collection Date Time: 04/16/2024 09:50

Description: **MW-113**

Sample Received Date Time: 04/19/2024 11:37

Metals by SW846 6000 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Antimony	0.003	J	mg/L	0.005	0.002	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:45	MRWD
Arsenic	0.0213		mg/L	0.0010	0.0004	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:45	MRWD
Barium	0.020		mg/L	0.004	0.001	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:45	MRWD
Beryllium	ND	u	mg/L	0.0020	0.0010	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:45	MRWD
Boron	ND	u	mg/L	0.10	0.10	SW846 6010 B	04/22/2024 09:20	04/29/2024 20:32	AKB
Cadmium	ND	u	mg/L	0.0010	0.0001	SW846-6020 A	04/22/2024 09:20	04/29/2024 21:15	MRWD
Calcium	226	D1	mg/L	50.0	25.0	SW846 6010 B	04/22/2024 09:20	04/29/2024 20:39	AKB
Chromium	ND	u	mg/L	0.0020	0.0006	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:45	MRWD
Cobalt	ND	u	mg/L	0.004	0.004	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:45	MRWD
Copper	ND	u	mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:45	MRWD
Iron	8.34		mg/L	0.100	0.050	SW846 6010 B	04/22/2024 09:20	04/29/2024 20:32	AKB
Lead	ND	u	mg/L	0.002	0.0005	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:45	MRWD
Lithium	0.04		mg/L	0.02	0.005	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:45	MRWD
Magnesium	119	D1	mg/L	20.0	9.00	SW846 6010 B	04/22/2024 09:20	04/29/2024 20:39	AKB
Molybdenum	0.002	J	mg/L	0.01	0.002	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:45	MRWD
Nickel	0.009		mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:45	MRWD
Potassium	2.43		mg/L	0.50	0.22	SW846 6010 B	04/22/2024 09:20	04/29/2024 20:32	AKB
Selenium	ND	u	mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:45	MRWD
Sodium	138	C6, D1	mg/L	26.0	10.0	SW846 6010 B	04/22/2024 09:20	04/30/2024 14:39	AKB
Thallium	ND	u	mg/L	0.0020	0.0001	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:45	MRWD
Zinc	0.009	J	mg/L	0.02	0.004	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:45	MRWD

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	u	ng/L	5.0	1.8	EPA 245.7 REV 2	04/30/2024 09:18	04/30/2024 13:11	TML

Conventional Chemistry Analyses Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Bicarbonate Alkalinity as CaCO3	410		mg/L	4	4	2320 B-2011	04/29/2024 20:02	04/29/2024 20:02	HMF
Carbonate Alkalinity as CaCO3	ND	u	mg/L	4		2320 B-2011	04/29/2024 20:02	04/29/2024 20:02	HMF
Total Alkalinity	410		mg/L	4	4	2320 B-2011	04/29/2024 20:02	04/29/2024 20:02	HMF
Chemical Oxygen Demand	25		mg/L	13	8	HACH 8000	04/23/2024 08:27	04/23/2024 15:09	ORK
Specific Conductance (Lab)	2280		umhos/cm	1	1	2510 B-2011	04/22/2024 09:20	04/22/2024 14:15	AED
Hardness as CaCO3	894	D1, D	mg/L	2	2	2340 C (as HACH 8226)	04/25/2024 07:55	04/25/2024 07:55	CLL
Total Dissolved Solids	1340		mg/L	250	250	2540 C-2015	04/23/2024 12:06	04/23/2024 12:06	HAG
Total Organic Carbon	3.3		mg/L	0.5	0.2	5310 C-2014	04/25/2024 11:10	04/26/2024 09:53	HMF

Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
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Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	1.29	_Sub	pCi/L			EPA 903.1	05/20/2024 08:57	05/20/2024 08:58	RCW
See Attached Subcontract Report	1.83	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	05/20/2024 08:57	05/20/2024 08:58	RCW
See Attached Subcontract Report	3.12	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	05/20/2024 08:57	05/20/2024 08:58	RCW

Ion Chromatography Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Chloride	36.9		mg/L	0.5	0.4	EPA 300.0 REV 2.1	04/29/2024 21:25	04/29/2024 21:25	CLS3
Fluoride	0.22		mg/L	0.20	0.18	EPA 300.0 REV 2.1	04/29/2024 21:25	04/29/2024 21:25	CLS3
Sulfate	1890	D	mg/L	20.0	1.9	EPA 300.0 REV 2.1	04/29/2024 21:52	04/29/2024 21:52	CLS3



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ANALYTICAL RESULTS

Lab Sample ID: 4042964-36
Description: Mercury Field Blank MW-113

Sample Collection Date Time: 04/16/2024 09:50
Sample Received Date Time: 04/19/2024 11:37

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	u	ng/L	5.0	1.8	EPA 245.7 REV 2	04/30/2024 09:18	04/30/2024 14:02	TML



ANALYTICAL RESULTS

Lab Sample ID: **4042964-37**

Sample Collection Date Time: 04/16/2024 12:45

Description: **MW-114**

Sample Received Date Time: 04/19/2024 11:37

Metals by SW846 6000 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Antimony	0.003	J	mg/L	0.005	0.002	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:48	MRWD
Arsenic	0.0015		mg/L	0.0010	0.0004	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:48	MRWD
Barium	0.045		mg/L	0.004	0.001	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:48	MRWD
Beryllium	ND	u	mg/L	0.0020	0.0010	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:48	MRWD
Boron	ND	u	mg/L	0.10	0.10	SW846 6010 B	04/22/2024 09:20	04/29/2024 20:42	AKB
Cadmium	ND	u	mg/L	0.0010	0.0001	SW846-6020 A	04/22/2024 09:20	04/29/2024 21:19	MRWD
Calcium	103	D1	mg/L	50.0	25.0	SW846 6010 B	04/22/2024 09:20	04/29/2024 20:48	AKB
Chromium	ND	u	mg/L	0.0020	0.0006	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:48	MRWD
Cobalt	ND	u	mg/L	0.004	0.004	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:48	MRWD
Copper	ND	u	mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:48	MRWD
Iron	0.953		mg/L	0.100	0.050	SW846 6010 B	04/22/2024 09:20	04/29/2024 20:42	AKB
Lead	ND	u	mg/L	0.002	0.0005	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:48	MRWD
Lithium	0.02		mg/L	0.02	0.005	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:48	MRWD
Magnesium	28.0	D1	mg/L	2.00	0.900	SW846 6010 B	04/22/2024 09:20	04/29/2024 20:45	AKB
Molybdenum	0.002	J	mg/L	0.01	0.002	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:48	MRWD
Nickel	0.002	J	mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:48	MRWD
Potassium	1.61		mg/L	0.50	0.22	SW846 6010 B	04/22/2024 09:20	04/29/2024 20:42	AKB
Selenium	ND	u	mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:48	MRWD
Sodium	67.5	C6, D1	mg/L	2.60	1.00	SW846 6010 B	04/22/2024 09:20	04/30/2024 14:42	AKB
Thallium	ND	u	mg/L	0.0020	0.0001	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:48	MRWD
Zinc	0.006	J	mg/L	0.02	0.004	SW846-6020 A	04/22/2024 09:20	04/28/2024 21:48	MRWD

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	u	ng/L	5.0	1.8	EPA 245.7 REV 2	04/30/2024 09:18	04/30/2024 13:17	TML

Conventional Chemistry Analyses Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Bicarbonate Alkalinity as CaCO3	318		mg/L	4	4	2320 B-2011	04/29/2024 20:08	04/29/2024 20:08	HMF
Carbonate Alkalinity as CaCO3	ND	u	mg/L	4		2320 B-2011	04/29/2024 20:08	04/29/2024 20:08	HMF
Total Alkalinity	318	M3	mg/L	4	4	2320 B-2011	04/29/2024 20:08	04/29/2024 20:08	HMF
Chemical Oxygen Demand	ND	u	mg/L	13	8	HACH 8000	04/23/2024 08:27	04/23/2024 15:09	ORK
Specific Conductance (Lab)	1060		umhos/cm	1	1	2510 B-2011	04/22/2024 09:22	04/22/2024 14:15	AED
Hardness as CaCO3	379		mg/L	1	1	2340 C (as HACH 8226)	04/25/2024 07:55	04/25/2024 07:55	CLL
Total Dissolved Solids	724		mg/L	100	100	2540 C-2015	04/23/2024 12:06	04/23/2024 12:06	HAG
Total Organic Carbon	0.7		mg/L	0.5	0.2	5310 C-2014	04/25/2024 11:10	04/26/2024 10:07	HMF

Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
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Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	-0.106	_Sub	pCi/L			EPA 903.1	05/20/2024 08:57	05/20/2024 08:58	RCW
See Attached Subcontract Report	2.23	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	05/20/2024 08:57	05/20/2024 08:58	RCW
See Attached Subcontract Report	2.23	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	05/20/2024 08:57	05/20/2024 08:58	RCW

Ion Chromatography Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Chloride	34.4		mg/L	0.5	0.4	EPA 300.0 REV 2.1	04/29/2024 22:20	04/29/2024 22:20	CLS3
Fluoride	0.27		mg/L	0.20	0.18	EPA 300.0 REV 2.1	04/29/2024 22:20	04/29/2024 22:20	CLS3
Sulfate	157		mg/L	1.0	0.09	EPA 300.0 REV 2.1	04/29/2024 22:20	04/29/2024 22:20	CLS3



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ANALYTICAL RESULTS

Lab Sample ID: 4042964-38
Description: Mercury Field Blank MW-114

Sample Collection Date Time: 04/16/2024 12:45
Sample Received Date Time: 04/19/2024 11:37

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	u	ng/L	5.0	1.8	EPA 245.7 REV 2	04/30/2024 09:18	04/30/2024 14:13	TML



ANALYTICAL RESULTS

Lab Sample ID: 4042964-41

Sample Collection Date Time: 04/16/2024 07:42

Description: Well Duplicate 2

Sample Received Date Time: 04/17/2024 00:00

Metals by SW846 6000 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Antimony	0.002	J	mg/L	0.005	0.002	SW846-6020 A	04/22/2024 09:20	04/28/2024 22:14	MRWD
Arsenic	0.0025		mg/L	0.0010	0.0004	SW846-6020 A	04/22/2024 09:20	04/28/2024 22:14	MRWD
Barium	0.060		mg/L	0.004	0.001	SW846-6020 A	04/22/2024 09:20	04/28/2024 22:14	MRWD
Beryllium	ND	u	mg/L	0.0020	0.0010	SW846-6020 A	04/22/2024 09:20	04/28/2024 22:14	MRWD
Boron	ND	u, M2, V1	mg/L	0.10	0.10	SW846 6010 B	04/22/2024 09:20	04/29/2024 21:10	AKB
Cadmium	ND	u	mg/L	0.0010	0.0001	SW846-6020 A	04/22/2024 09:20	04/29/2024 21:26	MRWD
Calcium	41.9	D1	mg/L	5.00	2.50	SW846 6010 B	04/22/2024 09:20	04/29/2024 21:14	AKB
Chromium	ND	u	mg/L	0.0020	0.0006	SW846-6020 A	04/22/2024 09:20	04/28/2024 22:14	MRWD
Cobalt	ND	u	mg/L	0.004	0.004	SW846-6020 A	04/22/2024 09:20	04/28/2024 22:14	MRWD
Copper	ND	u	mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:20	04/28/2024 22:14	MRWD
Iron	4.57		mg/L	0.100	0.050	SW846 6010 B	04/22/2024 09:20	04/29/2024 21:10	AKB
Lead	ND	u	mg/L	0.002	0.0005	SW846-6020 A	04/22/2024 09:20	04/28/2024 22:14	MRWD
Lithium	ND	u	mg/L	0.02	0.005	SW846-6020 A	04/22/2024 09:20	04/28/2024 22:14	MRWD
Magnesium	21.5	D1	mg/L	2.00	0.900	SW846 6010 B	04/22/2024 09:20	04/29/2024 21:14	AKB
Molybdenum	ND	u	mg/L	0.01	0.002	SW846-6020 A	04/22/2024 09:20	04/28/2024 22:14	MRWD
Nickel	ND	u	mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:20	04/28/2024 22:14	MRWD
Potassium	0.52		mg/L	0.50	0.22	SW846 6010 B	04/22/2024 09:20	04/29/2024 21:10	AKB
Selenium	ND	u	mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:20	04/28/2024 22:14	MRWD
Sodium	28.0	C6, D1, M2	mg/L	2.60	1.00	SW846 6010 B	04/22/2024 09:20	04/30/2024 14:48	AKB
Thallium	ND	u	mg/L	0.0020	0.0001	SW846-6020 A	04/22/2024 09:20	04/28/2024 22:14	MRWD
Zinc	0.006	J	mg/L	0.02	0.004	SW846-6020 A	04/22/2024 09:20	04/28/2024 22:14	MRWD

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	u	ng/L	5.0	1.8	EPA 245.7 REV 2	04/30/2024 12:02	04/30/2024 15:20	TML

Conventional Chemistry Analyses Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Bicarbonate Alkalinity as CaCO3	147		mg/L	4	4	2320 B-2011	04/29/2024 21:23	04/29/2024 21:23	HMF
Carbonate Alkalinity as CaCO3	ND	u	mg/L	4		2320 B-2011	04/29/2024 21:23	04/29/2024 21:23	HMF
Total Alkalinity	147	M3	mg/L	4	4	2320 B-2011	04/29/2024 21:23	04/29/2024 21:23	HMF
Chemical Oxygen Demand	11	J	mg/L	13	8	HACH 8000	04/23/2024 08:32	04/23/2024 15:09	ORK
Specific Conductance (Lab)	505		umhos/cm	1	1	2510 B-2011	04/22/2024 09:22	04/22/2024 14:15	AED
Hardness as CaCO3	174		mg/L	1	1	2340 C (as HACH 8226)	04/25/2024 07:55	04/25/2024 07:55	CLL
Total Dissolved Solids	260		mg/L	50	50	2540 C-2015	04/23/2024 12:06	04/23/2024 12:06	HAG
Total Organic Carbon	1.6		mg/L	0.5	0.2	5310 C-2014	04/25/2024 11:10	04/26/2024 11:40	HMF



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Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	1.06	_Sub	pCi/L			EPA 903.1	05/20/2024 08:57	05/20/2024 08:58	RCW
See Attached Subcontract Report	1.12	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	05/20/2024 08:57	05/20/2024 08:58	RCW
See Attached Subcontract Report	2.18	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	05/20/2024 08:57	05/20/2024 08:58	RCW

Ion Chromatography Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Chloride	10.9		mg/L	0.5	0.4	EPA 300.0 REV 2.1	04/30/2024 01:04	04/30/2024 01:04	CLS3
Fluoride	0.30		mg/L	0.20	0.18	EPA 300.0 REV 2.1	04/30/2024 01:04	04/30/2024 01:04	CLS3
Sulfate	72.9		mg/L	1.0	0.09	EPA 300.0 REV 2.1	04/30/2024 01:04	04/30/2024 01:04	CLS3



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ANALYTICAL RESULTS

Lab Sample ID: 4042964-42
Description: Mercury Field Blank Well Dup-2

Sample Collection Date Time: 04/16/2024 07:42
Sample Received Date Time: 04/19/2024 11:37

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	u	ng/L	5.0	1.8	EPA 245.7 REV 2	05/02/2024 11:06	05/02/2024 18:16	TML



ANALYTICAL RESULTS

Lab Sample ID: **4042964-43**

Sample Collection Date Time: 04/17/2024 10:30

Description: **Field Blank**

Sample Received Date Time: 04/19/2024 11:37

Metals by SW846 6000 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Antimony	0.002	J	mg/L	0.005	0.002	SW846-6020 A	04/22/2024 09:20	04/28/2024 22:18	MRWD
Arsenic	ND	u	mg/L	0.0010	0.0004	SW846-6020 A	04/22/2024 09:20	04/28/2024 22:18	MRWD
Barium	ND	u	mg/L	0.004	0.001	SW846-6020 A	04/22/2024 09:20	04/28/2024 22:18	MRWD
Beryllium	ND	u	mg/L	0.0020	0.0010	SW846-6020 A	04/22/2024 09:20	04/28/2024 22:18	MRWD
Boron	ND	u, v1	mg/L	0.10	0.10	SW846 6010 B	04/22/2024 09:20	04/29/2024 21:20	AKB
Cadmium	ND	u	mg/L	0.0010	0.0001	SW846-6020 A	04/22/2024 09:20	04/29/2024 21:30	MRWD
Calcium	ND	u	mg/L	0.50	0.25	SW846 6010 B	04/22/2024 09:20	04/29/2024 21:20	AKB
Chromium	ND	u	mg/L	0.0020	0.0006	SW846-6020 A	04/22/2024 09:20	04/28/2024 22:18	MRWD
Cobalt	ND	u	mg/L	0.004	0.004	SW846-6020 A	04/22/2024 09:20	04/28/2024 22:18	MRWD
Copper	ND	u	mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:20	04/28/2024 22:18	MRWD
Iron	ND	u	mg/L	0.100	0.050	SW846 6010 B	04/22/2024 09:20	04/29/2024 21:20	AKB
Lead	ND	u	mg/L	0.002	0.0005	SW846-6020 A	04/22/2024 09:20	04/28/2024 22:18	MRWD
Lithium	ND	u	mg/L	0.02	0.005	SW846-6020 A	04/22/2024 09:20	04/28/2024 22:18	MRWD
Magnesium	ND	u	mg/L	0.200	0.090	SW846 6010 B	04/22/2024 09:20	04/29/2024 21:20	AKB
Molybdenum	ND	u	mg/L	0.01	0.002	SW846-6020 A	04/22/2024 09:20	04/28/2024 22:18	MRWD
Nickel	ND	u	mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:20	04/28/2024 22:18	MRWD
Potassium	ND	u	mg/L	0.50	0.22	SW846 6010 B	04/22/2024 09:20	04/29/2024 21:20	AKB
Selenium	ND	u	mg/L	0.003	0.001	SW846-6020 A	04/22/2024 09:20	04/28/2024 22:18	MRWD
Sodium	ND	c6, u	mg/L	0.26	0.10	SW846 6010 B	04/22/2024 09:20	04/30/2024 14:52	AKB
Thallium	ND	u	mg/L	0.0020	0.0001	SW846-6020 A	04/22/2024 09:20	04/28/2024 22:18	MRWD
Zinc	0.008	J	mg/L	0.02	0.004	SW846-6020 A	04/22/2024 09:20	04/28/2024 22:18	MRWD

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	9.1		ng/L	5.0	1.8	EPA 245.7 REV 2	04/30/2024 12:02	04/30/2024 14:52	TML

Conventional Chemistry Analyses Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Bicarbonate Alkalinity as CaCO3	8		mg/L	4	4	2320 B-2011	04/29/2024 21:27	04/29/2024 21:27	HMF
Carbonate Alkalinity as CaCO3	ND	u	mg/L	4		2320 B-2011	04/29/2024 21:27	04/29/2024 21:27	HMF
Total Alkalinity	8		mg/L	4	4	2320 B-2011	04/29/2024 21:27	04/29/2024 21:27	HMF
Chemical Oxygen Demand	9	J	mg/L	13	8	HACH 8000	04/23/2024 08:27	04/23/2024 15:09	ORK
Specific Conductance (Lab)	6		umhos/cm	1	1	2510 B-2011	04/22/2024 09:22	04/22/2024 14:15	AED
Hardness as CaCO3	24		mg/L	1	1	2340 C (as HACH 8226)	04/25/2024 07:55	04/25/2024 07:55	CLL
Total Dissolved Solids	124		mg/L	100	100	2540 C-2015	04/23/2024 12:06	04/23/2024 12:06	HAG
Total Organic Carbon	0.4	J	mg/L	0.5	0.2	5310 C-2014	04/25/2024 11:10	04/26/2024 11:53	HMF

Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
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Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	-0.797	_Sub	pCi/L			EPA 903.1	05/20/2024 08:57	05/20/2024 08:58	RCW
See Attached Subcontract Report	0.421	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	05/20/2024 08:57	05/20/2024 08:58	RCW
See Attached Subcontract Report	0.421	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	05/20/2024 08:57	05/20/2024 08:58	RCW

Ion Chromatography Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Chloride	ND	u	mg/L	0.5	0.4	EPA 300.0 REV 2.1	04/30/2024 01:59	04/30/2024 01:59	CLS3
Fluoride	ND	u	mg/L	0.20		EPA 300.0 REV 2.1	04/30/2024 01:59	04/30/2024 01:59	CLS3
Sulfate	ND	u	mg/L	1.0	0.09	EPA 300.0 REV 2.1	04/30/2024 01:59	04/30/2024 01:59	CLS3



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ANALYTICAL RESULTS

Lab Sample ID: 4042964-44
Description: Mercury Field Blank

Sample Collection Date Time: 04/17/2024 10:30
Sample Received Date Time: 04/19/2024 11:37

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	u	ng/L	5.0	1.8	EPA 245.7 REV 2	05/02/2024 11:06	05/02/2024 18:27	TML



Notes for work order 4042964

- Samples collected by PACE personnel are done so in accordance with procedures set forth in PACE field services SOPs .
 - Results contained in this report are only representative of the samples received.
 - PACE does not provide interpretation of these results unless otherwise stated .
 - All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
 - All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
 - Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
 - The Chain of Custody document is included as part of this report.
 - All Library Search analytes should be regarded as tentative identification based on the presumptive evidence of the mass spectra.
- Concentrations reported are estimated values.

Qualifiers

_Sub	See subcontractors report.
A-01	DATA INVALID DUE TO CLOSING QC REQUIREMENTS NOT MET. CCV/CCB POSITIONS SWAPPED.
C6	Quantitative confirmation performed. Sample ran twice.
D	Results reported from dilution.
D1	Sample required dilution due to high concentration of target analyte.
D2	Sample required dilution due to matrix interference.
E	Concentration exceeds calibration range
H2	Initial analysis within holding time. Reanalysis was past holding time.
J	Estimated value.
L2	The associated blank spike recovery was below method acceptance limits.
M1	Matrix spike recovery was high; the method control sample recovery was acceptable.
M2	Matrix spike recovery was low; the method control sample recovery was acceptable.
M3	The accuracy of the spike recovery value is reduced since the analyte concentration in the sample is disproportionate to spike level. The method control sample recovery was acceptable.
U	Target analyte was analyzed for, but was below detection limit (the value associated with the qualifier is the laboratory method detection limit in our LIMS system).
V1	CCV recovery was above method acceptance limits. This target analyte not detected in the sample.
Y1	Sample RPD exceeded the method control limit.
Y5	MS/MSD RPD exceeded the method control limit.

Standard Qualifiers/Acronyms

MDL	Method Detection Limit
MRL	Minimum Reporting Limit
ND	Not Detected
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
% Rec	Percent Recovery
RPD	Relative Percent Difference
>	Greater than
<	Less than



Metals by SW846 6000 Series Methods Madisonville - Quality Control

Analyte	Result	Reporting		Spike	Source	%REC		RPD	Notes
		Limit	Units			%REC	Limits		

Batch BDD2304 - EPA 200.2

Blank (BDD2304-BLK1)

Prepared: 4/22/2024 9:18, Analyzed: 4/28/2024 13:14

Molybdenum	ND	0.01	mg/L						U
Antimony	ND	0.005	mg/L						U
Arsenic	ND	0.0010	mg/L						U
Barium	ND	0.004	mg/L						U
Beryllium	ND	0.0020	mg/L						U
Cadmium	ND	0.0010	mg/L						U
Chromium	ND	0.0020	mg/L						U
Cobalt	ND	0.004	mg/L						U
Copper	ND	0.003	mg/L						U
Lead	ND	0.002	mg/L						U
Lithium	ND	0.02	mg/L						U
Selenium	ND	0.003	mg/L						U
Thallium	ND	0.0020	mg/L						U
Zinc	ND	0.02	mg/L						U

Blank (BDD2304-BLK2)

Prepared: 4/22/2024 9:18, Analyzed: 4/29/2024 21:37

Lithium	ND	0.02	mg/L						U
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Blank (BDD2304-BLK3)

Prepared: 4/22/2024 9:18, Analyzed: 5/3/2024 20:07

Boron	ND	0.10	mg/L						U
Calcium	ND	0.50	mg/L						U
Iron	ND	0.100	mg/L						U
Magnesium	ND	0.200	mg/L						U
Potassium	ND	0.50	mg/L						U
Sodium	ND	0.26	mg/L						U
Nickel	ND	0.003	mg/L						U

Blank (BDD2304-BLK4)

Prepared: 4/22/2024 9:18, Analyzed: 5/5/2024 19:31

Nickel	ND	0.003	mg/L						U
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Metals by SW846 6000 Series Methods Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
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Batch BDD2304 - EPA 200.2

LCS (BDD2304-BS1)

Prepared: 4/22/2024 9:18, Analyzed: 4/28/2024 13:17

Molybdenum	0.07	0.01	mg/L	0.0625		107	85-115		
Antimony	0.069	0.005	mg/L	0.0625		111	85-115		
Arsenic	0.0642	0.0010	mg/L	0.0625		103	85-115		
Barium	0.067	0.004	mg/L	0.0625		107	85-115		
Beryllium	0.0709	0.0020	mg/L	0.0625		113	85-115		
Cadmium	0.0656	0.0010	mg/L	0.0625		105	85-115		
Chromium	0.0652	0.0020	mg/L	0.0625		104	85-115		
Cobalt	0.064	0.004	mg/L	0.0625		103	85-115		
Copper	0.065	0.003	mg/L	0.0625		103	85-115		
Lead	0.067	0.002	mg/L	0.0625		107	85-115		
Nickel	0.067	0.003	mg/L	0.0625		108	85-115		
Selenium	0.064	0.003	mg/L	0.0625		103	85-115		
Thallium	0.0681	0.0020	mg/L	0.0625		109	85-115		
Zinc	0.07	0.02	mg/L	0.0625		110	85-115		

LCS (BDD2304-BS2)

Prepared: 4/22/2024 9:18, Analyzed: 4/29/2024 21:40

Lithium	0.06	0.02	mg/L	0.0625		98.3	85-115		
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LCS (BDD2304-BS3)

Prepared: 4/22/2024 9:18, Analyzed: 5/3/2024 20:10

Boron	0.13	0.10	mg/L	0.125		105	85-115		
Calcium	6.91	0.50	mg/L	6.25		111	85-115		
Iron	6.67	0.100	mg/L	6.25		107	85-115		
Magnesium	6.60	0.200	mg/L	6.25		106	85-115		
Potassium	6.88	0.50	mg/L	6.25		110	85-115		
Sodium	6.08	0.26	mg/L	6.25		97.3	85-115		

LCS (BDD2304-BS4)

Prepared: 4/22/2024 9:18, Analyzed: 5/5/2024 19:35

Nickel	0.065	0.003	mg/L	0.0625		105	85-115		
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Metals by SW846 6000 Series Methods Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDD2304 - EPA 200.2

Matrix Spike (BDD2304-MS1)

Source: 4042964-01

Prepared: 4/22/2024 9:18, Analyzed: 4/29/2024 0:12

Molybdenum	0.06	0.01	mg/L	0.0625	0.008	87.9	80-120			
Antimony	0.070	0.005	mg/L	0.0625	0.002	112	80-120			
Arsenic	0.0792	0.0010	mg/L	0.0625	0.0099	111	80-120			
Barium	0.074	0.004	mg/L	0.0625	0.010	102	80-120			
Beryllium	0.0493	0.0020	mg/L	0.0625	ND	78.9	80-120			M2
Cadmium	0.0629	0.0010	mg/L	0.0625	0.0038	94.5	80-120			
Chromium	0.0640	0.0020	mg/L	0.0625	0.0039	96.2	80-120			
Cobalt	0.288	0.004	mg/L	0.0625	0.247	65.3	80-120			M2
Copper	0.058	0.003	mg/L	0.0625	0.002	89.0	80-120			
Lead	0.059	0.002	mg/L	0.0625	ND	93.7	80-120			
Lithium	0.16	0.02	mg/L	0.0625	0.13	53.7	80-120			M2
Nickel	0.520	0.003	mg/L	0.0625	0.469	82.0	80-120			
Selenium	0.053	0.003	mg/L	0.0625	ND	84.8	80-120			
Thallium	0.0613	0.0020	mg/L	0.0625	0.0002	97.7	80-120			
Zinc	0.79	0.02	mg/L	0.0625	0.87	NR	80-120			M3, E

Matrix Spike (BDD2304-MS2)

Source: 4042964-11

Prepared: 4/22/2024 9:18, Analyzed: 4/29/2024 0:19

Antimony	0.071	0.005	mg/L	0.0625	ND	113	80-120			
Molybdenum	0.07	0.01	mg/L	0.0625	0.004	111	80-120			
Arsenic	0.0781	0.0010	mg/L	0.0625	0.0030	120	80-120			
Barium	0.077	0.004	mg/L	0.0625	0.011	105	80-120			
Beryllium	0.0504	0.0020	mg/L	0.0625	ND	80.7	80-120			
Cadmium	0.0591	0.0010	mg/L	0.0625	ND	94.5	80-120			
Chromium	0.0663	0.0020	mg/L	0.0625	ND	106	80-120			
Cobalt	0.068	0.004	mg/L	0.0625	0.006	99.5	80-120			
Copper	0.060	0.003	mg/L	0.0625	0.002	92.9	80-120			
Lead	0.056	0.002	mg/L	0.0625	ND	89.4	80-120			
Lithium	0.08	0.02	mg/L	0.0625	0.04	66.4	80-120			M2
Nickel	0.065	0.003	mg/L	0.0625	0.006	94.8	80-120			
Selenium	0.052	0.003	mg/L	0.0625	ND	83.8	80-120			
Thallium	0.0575	0.0020	mg/L	0.0625	ND	92.0	80-120			
Zinc	0.07	0.02	mg/L	0.0625	0.01	89.2	80-120			



Metals by SW846 6000 Series Methods Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDD2304 - EPA 200.2

Matrix Spike (BDD2304-MS3)

Source: 4042964-01

Prepared: 4/22/2024 9:18, Analyzed: 5/3/2024 23:18

Boron	ND	1.00	mg/L	0.125	ND		80-120			D2, M2, U
Calcium	569	5.00	mg/L	6.25	582	NR	80-120			D2, M3
Iron	68.0	1.00	mg/L	6.25	62.8	83.7	80-120			D2
Magnesium	193	2.00	mg/L	6.25	205	NR	80-120			D2, M3
Potassium	13.7	5.00	mg/L	6.25	8.36	85.7	80-120			D2
Sodium	106	2.60	mg/L	6.25	104	21.1	80-120			D2, M3

Matrix Spike (BDD2304-MS4)

Source: 4042964-11

Prepared: 4/22/2024 9:18, Analyzed: 5/3/2024 23:24

Boron	ND	1.00	mg/L	0.125	ND		80-120			D2, M2, U
Calcium	636	5.00	mg/L	6.25	642	NR	80-120			D2, M3
Iron	14.4	1.00	mg/L	6.25	7.82	106	80-120			D2
Magnesium	281	2.00	mg/L	6.25	306	NR	80-120			D2, M3
Potassium	15.1	5.00	mg/L	6.25	9.79	85.1	80-120			D2
Sodium	105	2.60	mg/L	6.25	103	45.4	80-120			D2, M3

Matrix Spike Dup (BDD2304-MSD1)

Source: 4042964-01

Prepared: 4/22/2024 9:18, Analyzed: 4/29/2024 0:16

Antimony	0.069	0.005	mg/L	0.0625	0.002	111	80-120	1.14	20	
Molybdenum	0.06	0.01	mg/L	0.0625	0.008	91.2	80-120	3.31	20	
Arsenic	0.0828	0.0010	mg/L	0.0625	0.0099	117	80-120	4.37	20	
Barium	0.074	0.004	mg/L	0.0625	0.010	102	80-120	0.455	20	
Beryllium	0.0497	0.0020	mg/L	0.0625	ND	79.5	80-120	0.841	20	M2
Cadmium	0.0623	0.0010	mg/L	0.0625	0.0038	93.6	80-120	0.965	20	
Chromium	0.0663	0.0020	mg/L	0.0625	0.0039	99.9	80-120	3.57	20	
Cobalt	0.298	0.004	mg/L	0.0625	0.247	82.0	80-120	3.57	20	M2
Copper	0.060	0.003	mg/L	0.0625	0.002	91.9	80-120	3.03	20	
Lead	0.058	0.002	mg/L	0.0625	ND	92.6	80-120	1.14	20	
Lithium	0.16	0.02	mg/L	0.0625	0.13	54.3	80-120	0.234	20	M2
Nickel	0.541	0.003	mg/L	0.0625	0.469	116	80-120	4.00	20	
Selenium	0.053	0.003	mg/L	0.0625	ND	84.0	80-120	0.894	20	
Thallium	0.0597	0.0020	mg/L	0.0625	0.0002	95.1	80-120	2.68	20	
Zinc	0.83	0.02	mg/L	0.0625	0.87	NR	80-120	5.02	20	M3, E



Metals by SW846 6000 Series Methods Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDD2304 - EPA 200.2

Matrix Spike Dup (BDD2304-MSD2)

Source: 4042964-11

Prepared: 4/22/2024 9:18, Analyzed: 4/29/2024 0:23

Antimony	0.073	0.005	mg/L	0.0625	ND	117	80-120	3.23	20	
Molybdenum	0.07	0.01	mg/L	0.0625	0.004	109	80-120	1.98	20	
Arsenic	0.0810	0.0010	mg/L	0.0625	0.0030	125	80-120	3.74	20	M1
Barium	0.080	0.004	mg/L	0.0625	0.011	110	80-120	3.43	20	
Beryllium	0.0498	0.0020	mg/L	0.0625	ND	79.8	80-120	1.18	20	M2
Cadmium	0.0606	0.0010	mg/L	0.0625	ND	96.9	80-120	2.46	20	
Chromium	0.0666	0.0020	mg/L	0.0625	ND	106	80-120	0.401	20	
Cobalt	0.069	0.004	mg/L	0.0625	0.006	101	80-120	1.69	20	
Copper	0.062	0.003	mg/L	0.0625	0.002	96.3	80-120	3.44	20	
Lead	0.058	0.002	mg/L	0.0625	ND	92.3	80-120	3.20	20	
Lithium	0.08	0.02	mg/L	0.0625	0.04	65.9	80-120	0.410	20	M2
Nickel	0.066	0.003	mg/L	0.0625	0.006	97.2	80-120	2.26	20	
Selenium	0.062	0.003	mg/L	0.0625	ND	98.9	80-120	16.5	20	
Thallium	0.0594	0.0020	mg/L	0.0625	ND	95.1	80-120	3.23	20	
Zinc	0.07	0.02	mg/L	0.0625	0.01	91.7	80-120	2.25	20	

Matrix Spike Dup (BDD2304-MSD3)

Source: 4042964-01

Prepared: 4/22/2024 9:18, Analyzed: 5/3/2024 23:21

Boron	ND	1.00	mg/L	0.125	ND		80-120		20	D2, M2, U
Calcium	575	5.00	mg/L	6.25	582	NR	80-120	0.994	20	D2, M3
Iron	68.8	1.00	mg/L	6.25	62.8	96.6	80-120	1.18	20	D2
Magnesium	195	2.00	mg/L	6.25	205	NR	80-120	1.31	20	D2, M3
Potassium	13.9	5.00	mg/L	6.25	8.36	88.5	80-120	1.29	20	D2
Sodium	107	2.60	mg/L	6.25	104	38.8	80-120	1.05	20	D2, M3

Matrix Spike Dup (BDD2304-MSD4)

Source: 4042964-11

Prepared: 4/22/2024 9:18, Analyzed: 5/3/2024 23:28

Boron	1.00	1.00	mg/L	0.125	ND	801	80-120	1.46	20	D2, M1
Calcium	644	5.00	mg/L	6.25	642	25.7	80-120	1.24	20	M3, D2
Iron	14.6	1.00	mg/L	6.25	7.82	108	80-120	0.944	20	D2
Magnesium	285	2.00	mg/L	6.25	306	NR	80-120	1.20	20	D2, M3
Potassium	15.2	5.00	mg/L	6.25	9.79	87.2	80-120	0.881	20	D2
Sodium	107	2.60	mg/L	6.25	103	67.0	80-120	1.27	20	D2, M3



Metals by SW846 6000 Series Methods Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDD2304 - EPA 200.2

Post Spike (BDD2304-PS1)

Source: 4042964-01

Prepared: 4/22/2024 9:18, Analyzed: 4/29/2024 0:45

Antimony	70.7		ug/L	62.5	1.52	111	75-125			
Molybdenum	61.5		ug/L	62.5	7.91	85.8	75-125			
Arsenic	90.9		ug/L	62.5	9.90	130	75-125			M1
Barium	75.1		ug/L	62.5	9.87	104	75-125			
Beryllium	50.7		ug/L	62.5	0.320	80.6	75-125			
Cadmium	63.1		ug/L	62.5	3.79	95.0	75-125			
Chromium	63.2		ug/L	62.5	3.85	94.9	75-125			
Cobalt	286		ug/L	62.5	247	62.8	75-125			M2
Copper	58.4		ug/L	62.5	2.33	89.7	75-125			
Lead	54.5		ug/L	62.5	0.149	87.0	75-115			
Lithium	147		ug/L	62.5	126	33.8	75-125			M2
Nickel	525		ug/L	62.5	469	90.5	75-125			
Selenium	54.7		ug/L	62.5	0.651	86.5	75-125			
Thallium	55.9		ug/L	62.5	0.234	89.1	75-125			
Zinc	866		ug/L	62.5	867	NR	75-125			M3

Post Spike (BDD2304-PS2)

Source: 4042964-01

Prepared: 4/22/2024 9:18, Analyzed: 5/3/2024 23:31

Boron	321		ug/L	125	198	98.2	75-125			D2
Calcium	557000		ug/L	6250	582000	NR	75-125			D2, M3
Iron	66700		ug/L	6250	62800	62.5	75-125			D2, M2
Magnesium	190000		ug/L	6250	205000	NR	75-125			D2, M3
Potassium	13500		ug/L	6250	8360	82.0	75-125			D2
Sodium	103000		ug/L	6250	104000	NR	75-125			D2, M3

Batch BDD2306 - EPA 200.2

Blank (BDD2306-BLK1)

Prepared: 4/22/2024 9:20, Analyzed: 4/29/2024 19:32

Boron	ND	0.10	mg/L							U
Molybdenum	ND	0.01	mg/L							U
Antimony	ND	0.005	mg/L							U
Calcium	ND	0.50	mg/L							U
Arsenic	ND	0.0010	mg/L							U
Iron	ND	0.100	mg/L							U
Barium	ND	0.004	mg/L							U
Magnesium	ND	0.200	mg/L							U
Beryllium	ND	0.0020	mg/L							U
Potassium	ND	0.50	mg/L							U
Cadmium	ND	0.0010	mg/L							U
Chromium	ND	0.0020	mg/L							U
Sodium	ND	0.26	mg/L							U
Cobalt	ND	0.004	mg/L							U
Copper	ND	0.003	mg/L							U
Lead	ND	0.002	mg/L							U
Lithium	ND	0.02	mg/L							U
Nickel	ND	0.003	mg/L							U
Selenium	ND	0.003	mg/L							U
Thallium	ND	0.0020	mg/L							U



Metals by SW846 6000 Series Methods Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDD2306 - EPA 200.2

Blank (BDD2306-BLK1)

Prepared: 4/22/2024 9:20, Analyzed: 4/28/2024 14:52

Zinc	ND	0.02	mg/L							U
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Blank (BDD2306-BLK2)

Prepared: 4/22/2024 9:20, Analyzed: 4/29/2024 19:32

Boron	ND	0.10	mg/L							U
Calcium	ND	0.50	mg/L							U
Iron	ND	0.100	mg/L							U
Magnesium	ND	0.200	mg/L							U
Potassium	ND	0.50	mg/L							U
Sodium	ND	0.26	mg/L							U

Blank (BDD2306-BLK3)

Prepared: 4/22/2024 9:20, Analyzed: 4/29/2024 20:38

Cadmium	ND	0.0010	mg/L							U
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Blank (BDD2306-BLK4)

Prepared: 4/22/2024 9:20, Analyzed: 4/30/2024 14:14

Sodium	ND	0.26	mg/L							U
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LCS (BDD2306-BS1)

Prepared: 4/22/2024 9:20, Analyzed: 4/28/2024 14:56

Antimony	0.067	0.005	mg/L	0.0625		107	85-115			
Boron	0.12	0.10	mg/L	0.125		98.5	85-115			
Molybdenum	0.07	0.01	mg/L	0.0625		108	85-115			
Calcium	6.35	0.50	mg/L	6.25		102	85-115			
Arsenic	0.0647	0.0010	mg/L	0.0625		104	85-115			
Iron	6.27	0.100	mg/L	6.25		100	85-115			
Barium	0.063	0.004	mg/L	0.0625		100	85-115			
Beryllium	0.0628	0.0020	mg/L	0.0625		100	85-115			
Magnesium	6.18	0.200	mg/L	6.25		98.9	85-115			
Cadmium	0.0647	0.0010	mg/L	0.0625		103	85-115			
Potassium	6.32	0.50	mg/L	6.25		101	85-115			
Chromium	0.0653	0.0020	mg/L	0.0625		104	85-115			
Cobalt	0.066	0.004	mg/L	0.0625		105	85-115			
Copper	0.065	0.003	mg/L	0.0625		105	85-115			
Lead	0.065	0.002	mg/L	0.0625		104	85-115			
Lithium	0.06	0.02	mg/L	0.0625		102	85-115			
Nickel	0.066	0.003	mg/L	0.0625		105	85-115			
Selenium	0.062	0.003	mg/L	0.0625		99.7	85-115			
Thallium	0.0657	0.0020	mg/L	0.0625		105	85-115			
Zinc	0.07	0.02	mg/L	0.0625		107	85-115			



Metals by SW846 6000 Series Methods Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDD2306 - EPA 200.2

LCS (BDD2306-BS2)

Prepared: 4/22/2024 9:20, Analyzed: 4/29/2024 19:35

Boron	0.12	0.10	mg/L	0.125		98.5	85-115			
Calcium	6.35	0.50	mg/L	6.25		102	85-115			
Iron	6.27	0.100	mg/L	6.25		100	85-115			
Magnesium	6.18	0.200	mg/L	6.25		98.9	85-115			
Potassium	6.32	0.50	mg/L	6.25		101	85-115			
Sodium	5.30	0.26	mg/L	6.25		84.9	85-115			L2

LCS (BDD2306-BS3)

Prepared: 4/22/2024 9:20, Analyzed: 4/29/2024 20:42

Cadmium	0.0647	0.0010	mg/L	0.0625		104	85-115			
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LCS (BDD2306-BS4)

Prepared: 4/22/2024 9:20, Analyzed: 4/30/2024 14:26

Sodium	5.73	0.26	mg/L	6.25		91.6	85-115			
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Matrix Spike (BDD2306-MS1)

Source: 4042964-41

Prepared: 4/22/2024 9:20, Analyzed: 4/28/2024 22:25

Molybdenum	0.07	0.01	mg/L	0.0625	ND	114	80-120			
Boron	ND	1.00	mg/L	0.125	ND		80-120			U
Antimony	0.069	0.005	mg/L	0.0625	0.002	111	80-120			
Calcium	46.7	5.00	mg/L	6.25	41.9	77.7	80-120			
Arsenic	0.0657	0.0010	mg/L	0.0625	0.0025	101	80-120			
Iron	11.1	1.00	mg/L	6.25	4.57	104	80-120			
Barium	0.121	0.004	mg/L	0.0625	0.060	97.9	80-120			
Beryllium	0.0591	0.0020	mg/L	0.0625	ND	94.6	80-120			
Magnesium	27.3	2.00	mg/L	6.25	21.5	92.4	80-120			
Cadmium	0.0629	0.0010	mg/L	0.0625	ND	101	80-120			
Potassium	6.97	5.00	mg/L	6.25	ND	112	80-120			
Chromium	0.0651	0.0020	mg/L	0.0625	ND	104	80-120			
Cobalt	0.065	0.004	mg/L	0.0625	ND	103	80-120			
Copper	0.064	0.003	mg/L	0.0625	ND	103	80-120			
Lead	0.065	0.002	mg/L	0.0625	ND	103	80-120			
Lithium	0.07	0.02	mg/L	0.0625	ND	105	80-120			
Nickel	0.065	0.003	mg/L	0.0625	ND	104	80-120			
Selenium	0.058	0.003	mg/L	0.0625	ND	92.2	80-120			
Thallium	0.0669	0.0020	mg/L	0.0625	ND	107	80-120			
Zinc	0.06	0.02	mg/L	0.0625	0.006	91.9	80-120			



Metals by SW846 6000 Series Methods Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDD2306 - EPA 200.2

Matrix Spike (BDD2306-MS2)

Source: 4042964-41

Prepared: 4/22/2024 9:20, Analyzed: 4/29/2024 21:26

Boron	ND	1.00	mg/L	0.125	ND		80-120			M2, D2, U
Calcium	46.7	5.00	mg/L	6.25	41.9	77.7	80-120			D2, M2
Iron	11.1	1.00	mg/L	6.25	4.57	104	80-120			D2
Magnesium	27.3	2.00	mg/L	6.25	21.5	92.4	80-120			D2
Potassium	6.97	5.00	mg/L	6.25	ND	112	80-120			D2
Sodium	30.8	2.60	mg/L	6.25	28.0	45.6	80-120			D2, M2

Matrix Spike Dup (BDD2306-MSD1)

Source: 4042964-41

Prepared: 4/22/2024 9:20, Analyzed: 4/28/2024 22:29

Molybdenum	0.07	0.01	mg/L	0.0625	ND	114	80-120	0.395	20	
Boron	ND	1.00	mg/L	0.125	ND		80-120		20	U
Antimony	0.069	0.005	mg/L	0.0625	0.002	111	80-120	0.113	20	
Calcium	47.6	5.00	mg/L	6.25	41.9	91.2	80-120	1.79	20	
Arsenic	0.0664	0.0010	mg/L	0.0625	0.0025	102	80-120	1.14	20	
Iron	11.0	1.00	mg/L	6.25	4.57	104	80-120	0.0823	20	
Barium	0.125	0.004	mg/L	0.0625	0.060	105	80-120	3.56	20	
Beryllium	0.0588	0.0020	mg/L	0.0625	ND	94.1	80-120	0.450	20	
Magnesium	27.8	2.00	mg/L	6.25	21.5	101	80-120	1.97	20	
Cadmium	0.0633	0.0010	mg/L	0.0625	ND	101	80-120	0.521	20	
Potassium	7.12	5.00	mg/L	6.25	ND	114	80-120	2.06	20	
Chromium	0.0642	0.0020	mg/L	0.0625	ND	103	80-120	1.44	20	
Cobalt	0.064	0.004	mg/L	0.0625	ND	102	80-120	0.940	20	
Copper	0.064	0.003	mg/L	0.0625	ND	102	80-120	0.629	20	
Lead	0.065	0.002	mg/L	0.0625	ND	104	80-120	0.884	20	
Lithium	0.07	0.02	mg/L	0.0625	ND	106	80-120	1.70	20	
Nickel	0.064	0.003	mg/L	0.0625	ND	102	80-120	1.09	20	
Selenium	0.057	0.003	mg/L	0.0625	ND	91.0	80-120	1.31	20	
Thallium	0.0667	0.0020	mg/L	0.0625	ND	107	80-120	0.235	20	
Zinc	0.07	0.02	mg/L	0.0625	0.006	109	80-120	15.3	20	



Metals by SW846 6000 Series Methods Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDD2306 - EPA 200.2

Matrix Spike Dup (BDD2306-MSD2)

Source: 4042964-41

Prepared: 4/22/2024 9:20, Analyzed: 4/29/2024 21:30

Boron	ND	1.00	mg/L	0.125	ND		80-120		20	D2, M2, U
Calcium	47.6	5.00	mg/L	6.25	41.9	91.2	80-120	1.79	20	D2
Iron	11.0	1.00	mg/L	6.25	4.57	104	80-120	0.0823	20	D2
Magnesium	27.8	2.00	mg/L	6.25	21.5	101	80-120	1.97	20	D2
Potassium	7.12	5.00	mg/L	6.25	ND	114	80-120	2.06	20	D2
Sodium	31.5	2.60	mg/L	6.25	28.0	56.0	80-120	2.09	20	D2

Post Spike (BDD2306-PS1)

Source: 4042964-41

Prepared: 4/22/2024 9:20, Analyzed: 4/28/2024 22:32

Antimony	65.3		ug/L	62.5	1.66	102	75-125			
Molybdenum	68.4		ug/L	62.5	0.72	108	75-125			
Boron	138		ug/L	125	13.1	100	75-125			
Calcium	45900		ug/L	6250	41900	64.6	75-125			
Arsenic	63.4		ug/L	62.5	2.52	97.4	75-125			
Iron	10700		ug/L	6250	4570	97.3	75-125			
Barium	119		ug/L	62.5	59.8	94.3	75-125			
Beryllium	56.2		ug/L	62.5	-0.0051	89.9	75-125			
Magnesium	26700		ug/L	6250	21500	83.9	75-125			
Potassium	6680		ug/L	6250	524	98.5	75-125			
Cadmium	60.3		ug/L	62.5	0.0015	96.5	75-125			
Chromium	61.3		ug/L	62.5	0.265	97.7	75-125			
Cobalt	61.0		ug/L	62.5	0.059	97.5	75-125			
Copper	61.0		ug/L	62.5	0.390	97.0	75-125			
Lead	62.1		ug/L	62.5	0.059	99.2	75-115			
Lithium	62.2		ug/L	62.5	3.74	93.5	75-125			
Nickel	61.5		ug/L	62.5	0.640	97.3	75-125			
Selenium	56.0		ug/L	62.5	0.021	89.6	75-125			
Thallium	63.2		ug/L	62.5	0.0012	101	75-125			
Zinc	65.6		ug/L	62.5	6.27	95.0	75-125			



Metals by SW846 6000 Series Methods Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDD2306 - EPA 200.2

Post Spike (BDD2306-PS2)

Source: 4042964-41

Prepared: 4/22/2024 9:20, Analyzed: 4/29/2024 21:33

Boron	138		ug/L	125	13.1	100	75-125			D2
Calcium	45900		ug/L	6250	41900	64.6	75-125			D2, M2
Iron	10700		ug/L	6250	4570	97.3	75-125			D2
Magnesium	26700		ug/L	6250	21500	83.9	75-125			D2
Potassium	6680		ug/L	6250	524	98.5	75-125			D2
Sodium	30300		ug/L	6250	28000	37.1	75-125			D2, M2

Batch BDE2340 - EPA 200.2

Blank (BDE2340-BLK1)

Prepared: 5/21/2024 8:25, Analyzed: 5/21/2024 12:09

Beryllium	ND	0.0020	mg/L							U
Lithium	ND	0.02	mg/L							U

LCS (BDE2340-BS1)

Prepared: 5/21/2024 8:25, Analyzed: 5/21/2024 12:13

Beryllium	0.0687	0.0020	mg/L	0.0625		110	85-115			
Lithium	0.07	0.02	mg/L	0.0625		106	85-115			

Matrix Spike (BDE2340-MS1)

Source: 4042964-27RE1

Prepared: 5/21/2024 8:25, Analyzed: 5/21/2024 13:19

Beryllium	0.0522	0.0040	mg/L	0.0625	ND	83.6	80-120			D2
Lithium	0.08	0.04	mg/L	0.0625	0.03	76.1	80-120			D2

Matrix Spike (BDE2340-MS2)

Source: 4042964-27RE1

Prepared: 5/21/2024 8:25, Analyzed: 5/21/2024 13:26

Beryllium	0.0537	0.0040	mg/L	0.0625	ND	85.9	80-120			D2
Lithium	0.08	0.04	mg/L	0.0625	0.03	66.6	80-120			D2, M2

Matrix Spike Dup (BDE2340-MSD1)

Source: 4042964-27RE1

Prepared: 5/21/2024 8:25, Analyzed: 5/21/2024 13:23

Beryllium	0.0573	0.0040	mg/L	0.0625	ND	91.6	80-120	9.20	20	D2
Lithium	0.09	0.04	mg/L	0.0625	0.03	84.6	80-120	6.19	20	D2



Metals by SW846 6000 Series Methods Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDE2340 - EPA 200.2

Matrix Spike Dup (BDE2340-MSD2)

Source: 4042964-27RE1

Prepared: 5/21/2024 8:25, Analyzed: 5/21/2024 13:30

Beryllium	0.0541	0.0040	mg/L	0.0625	ND	86.6	80-120	0.866	20	D2
Lithium	0.08	0.04	mg/L	0.0625	0.03	67.7	80-120	0.923	20	D2

Post Spike (BDE2340-PS1)

Source: 4042964-27RE1

Prepared: 5/21/2024 8:25, Analyzed: 5/21/2024 13:52

Beryllium	ND	0.0040	mg/L	0.0625	ND		75-125			D2, M2, U
Lithium	0.03	0.04	mg/L	0.0625	0.03	NR	75-125			D2, M2, J



Metals by EPA 200 Series Methods Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
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Batch BDD3093 - Default Prep Metals

Blank (BDD3093-BLK1)

Prepared: 4/29/2024 9:35, Analyzed: 4/29/2024 12:29

Mercury	ND	5.0	ng/L						U
Mercury	ND	5.0	ng/L						U

Blank (BDD3093-BLK2)

Prepared: 4/29/2024 9:35, Analyzed: 4/29/2024 12:35

Mercury	ND	5.0	ng/L						U
Mercury	ND	5.0	ng/L						U

Blank (BDD3093-BLK3)

Prepared: 4/29/2024 9:35, Analyzed: 4/29/2024 12:41

Mercury	ND	5.0	ng/L						U
Mercury	ND	5.0	ng/L						U

LCS (BDD3093-BS1)

Prepared: 4/29/2024 9:35, Analyzed: 4/29/2024 12:46

Mercury	51.0	5.0	ng/L	50.0		102	76-113		
Mercury	51.0	5.0	ng/L	50.0		102	76-113		

LCS (BDD3093-BS2)

Prepared: 4/29/2024 9:35, Analyzed: 4/29/2024 12:52

Mercury	51.0	5.0	ng/L	50.0		102	76-113		
Mercury	51.0	5.0	ng/L	50.0		102	76-113		

LCS (BDD3093-BS3)

Prepared: 4/29/2024 9:35, Analyzed: 4/29/2024 12:57

Mercury	53.1	5.0	ng/L	50.0		106	76-113		
Mercury	53.1	5.0	ng/L	50.0		106	76-113		

LCS (BDD3093-BS4)

Prepared: 4/29/2024 9:35, Analyzed: 4/29/2024 13:03

Mercury	53.6	5.0	ng/L	50.0		107	76-113		
Mercury	53.6	5.0	ng/L	50.0		107	76-113		

LCS (BDD3093-BS5)

Prepared: 4/29/2024 9:35, Analyzed: 4/29/2024 13:09

Mercury	53.3	5.0	ng/L	50.0		107	76-113		
Mercury	53.3	5.0	ng/L	50.0		107	76-113		



Metals by EPA 200 Series Methods Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD Limit	Notes
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Batch BDD3093 - Default Prep Metals

Matrix Spike (BDD3093-MS1)

Source: 4042964-11

M2

Prepared: 4/29/2024 9:35, Analyzed: 4/29/2024 15:56

Mercury	28.3	5.0	ng/L	50.0	ND	56.7	63-111	
Mercury	28.3	5.0	ng/L	50.0	ND	56.7	63-111	

Matrix Spike (BDD3093-MS2)

Source: 4042964-15

Prepared: 4/29/2024 9:35, Analyzed: 4/29/2024 16:07

Mercury	36.5	5.0	ng/L	50.0	ND	73.1	63-111	
Mercury	36.5	5.0	ng/L	50.0	ND	73.1	63-111	

Matrix Spike Dup (BDD3093-MSD1)

Source: 4042964-11

M2

Prepared: 4/29/2024 9:35, Analyzed: 4/29/2024 16:01

Mercury	29.7	5.0	ng/L	50.0	ND	59.4	63-111	4.65	18
Mercury	29.7	5.0	ng/L	50.0	ND	59.4	63-111	4.65	18

Matrix Spike Dup (BDD3093-MSD2)

Source: 4042964-15

Prepared: 4/29/2024 9:35, Analyzed: 4/29/2024 16:13

Mercury	38.4	5.0	ng/L	50.0	ND	76.7	63-111	4.89	18
Mercury	38.4	5.0	ng/L	50.0	ND	76.7	63-111	4.89	18

Batch BDD3207 - Default Prep Metals

Blank (BDD3207-BLK1)

Prepared: 4/30/2024 9:18, Analyzed: 4/30/2024 11:52

Mercury	ND	5.0	ng/L						U
Mercury	ND	5.0	ng/L						U

Blank (BDD3207-BLK2)

Prepared: 4/30/2024 9:18, Analyzed: 4/30/2024 11:58

Mercury	ND	5.0	ng/L						U
Mercury	ND	5.0	ng/L						U

Blank (BDD3207-BLK3)

Prepared: 4/30/2024 9:18, Analyzed: 4/30/2024 12:03

Mercury	ND	5.0	ng/L						U
Mercury	ND	5.0	ng/L						U



Metals by EPA 200 Series Methods Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDD3207 - Default Prep Metals

LCS (BDD3207-BS1)

Prepared: 4/30/2024 9:18, Analyzed: 4/30/2024 12:09

Mercury	52.5	5.0	ng/L	50.0		105	76-113			
Mercury	52.5	5.0	ng/L	50.0		105	76-113			

Matrix Spike (BDD3207-MS1)

Source: 4042964-25

M2

Prepared: 4/30/2024 9:18, Analyzed: 4/30/2024 14:42

Mercury	44.1	5.0	ng/L	50.0	14.5	59.1	63-111			
Mercury	44.1	5.0	ng/L	50.0	14.5	59.1	63-111			

Matrix Spike (BDD3207-MS2)

Source: 4042964-27

Prepared: 4/30/2024 9:18, Analyzed: 4/30/2024 14:53

Mercury	37.1	5.0	ng/L	50.0	3.8	66.7	63-111			
Mercury	37.1	5.0	ng/L	50.0	3.8	66.7	63-111			

Matrix Spike Dup (BDD3207-MSD1)

Source: 4042964-25

M2

Prepared: 4/30/2024 9:18, Analyzed: 4/30/2024 14:47

Mercury	39.5	5.0	ng/L	50.0	14.5	50.0	63-111	10.8	18	
Mercury	39.5	5.0	ng/L	50.0	14.5	50.0	63-111	10.8	18	

Matrix Spike Dup (BDD3207-MSD2)

Source: 4042964-27

Prepared: 4/30/2024 9:18, Analyzed: 4/30/2024 14:59

Mercury	35.7	5.0	ng/L	50.0	3.8	63.9	63-111	3.81	18	
Mercury	35.7	5.0	ng/L	50.0	3.8	63.9	63-111	3.81	18	

Batch BDD3221 - Default Prep Metals

Blank (BDD3221-BLK1)

Prepared: 4/30/2024 12:02, Analyzed: 4/30/2024 13:55

Mercury	ND	5.0	ng/L							U
Mercury	ND	5.0	ng/L							U

Blank (BDD3221-BLK2)

Prepared: 4/30/2024 12:02, Analyzed: 4/30/2024 14:01

Mercury	ND	5.0	ng/L							U
Mercury	ND	5.0	ng/L							U



Metals by EPA 200 Series Methods Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
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Batch BDD3221 - Default Prep Metals

Blank (BDD3221-BLK3)

Prepared: 4/30/2024 12:02, Analyzed: 4/30/2024 14:06

Mercury	ND	5.0	ng/L						U
Mercury	ND	5.0	ng/L						U

LCS (BDD3221-BS1)

Prepared: 4/30/2024 12:02, Analyzed: 4/30/2024 14:18

Mercury	48.9	5.0	ng/L	50.0		97.7	76-113		
Mercury	48.9	5.0	ng/L	50.0		97.7	76-113		

Batch BDE0243 - Default Prep Metals

Blank (BDE0243-BLK1)

Prepared: 5/2/2024 11:06, Analyzed: 5/2/2024 16:06

Mercury	ND	5.0	ng/L						U
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Blank (BDE0243-BLK2)

Prepared: 5/2/2024 11:06, Analyzed: 5/2/2024 16:11

Mercury	ND	5.0	ng/L						U
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Blank (BDE0243-BLK3)

Prepared: 5/2/2024 11:06, Analyzed: 5/2/2024 16:17

Mercury	ND	5.0	ng/L						U
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LCS (BDE0243-BS1)

Prepared: 5/2/2024 11:06, Analyzed: 5/2/2024 16:22

Mercury	52.6	5.0	ng/L	50.0		105	76-113		
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Matrix Spike (BDE0243-MS1) Source: 4045667-01

M1

Prepared: 5/2/2024 11:06, Analyzed: 5/2/2024 19:01

Mercury	108	5.0	ng/L	50.0	41.7	133	63-111		
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Matrix Spike (BDE0243-MS2) Source: 4045837-01

M1

Prepared: 5/2/2024 11:06, Analyzed: 5/2/2024 19:12

Mercury	5.0	5.0	ng/L	50.0	ND	9.92	63-111		
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Analyte	Result	Reporting		Spike	Source	%REC		RPD	
		Limit	Units	Level	Result	%REC	Limits	RPD	Limit

Batch BDE0243 - Default Prep Metals

M1

Prepared: 5/2/2024 11:06, Analyzed: 5/2/2024 19:07

Mercury	113	5.0	ng/L	50.0	41.7	142	63-111	3.78	18
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M1, Y5

Prepared: 5/2/2024 11:06, Analyzed: 5/2/2024 19:18

Mercury	6.0	5.0	ng/L	50.0	ND	12.1	63-111	19.6	18
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Conventional Chemistry Analyses Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDD2281 - Default Prep Micro

Blank (BDD2281-BLK1)

Prepared: 4/22/2024 9:20, Analyzed: 4/22/2024 14:15

Specific Conductance (Lab)	ND	1	umhos/cm							U
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LCS (BDD2281-BS1)

Prepared: 4/22/2024 9:20, Analyzed: 4/22/2024 14:15

Specific Conductance (Lab)	1410		umhos/cm	1410		100	80-120			
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Duplicate (BDD2281-DUP1) Source: 4042964-01

Prepared: 4/22/2024 9:20, Analyzed: 4/22/2024 14:15

Specific Conductance (Lab)	3660	1	umhos/cm		3660			0.00	0.938	
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Duplicate (BDD2281-DUP2) Source: 4042964-11

Prepared: 4/22/2024 9:20, Analyzed: 4/22/2024 14:15

Specific Conductance (Lab)	4430	1	umhos/cm		4430			0.00	0.938	
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Batch BDD2340 - Default Prep Wet Chem

Blank (BDD2340-BLK1)

Prepared: 4/22/2024 18:34, Analyzed: 4/22/2024 18:34

Total Dissolved Solids	ND	25	mg/L							U
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LCS (BDD2340-BS1)

Prepared: 4/22/2024 18:34, Analyzed: 4/22/2024 18:34

Total Dissolved Solids	89		mg/L	90.0		98.9	80-120			
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Duplicate (BDD2340-DUP1) Source: 4042964-11

Prepared: 4/22/2024 18:34, Analyzed: 4/22/2024 18:34

Total Dissolved Solids	3700	250	mg/L		3320			10.8	10	Y1
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Duplicate (BDD2340-DUP2) Source: 4044853-01

Prepared: 4/22/2024 18:34, Analyzed: 4/22/2024 18:34

Total Dissolved Solids	118	25	mg/L		119			0.844	10	
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Batch BDD2382 - Default Prep Micro

Blank (BDD2382-BLK1)

Prepared: 4/22/2024 9:22, Analyzed: 4/22/2024 14:15

Specific Conductance (Lab)	ND	1	umhos/cm							U
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Conventional Chemistry Analyses Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDD2382 - Default Prep Micro

LCS (BDD2382-BS1)

Prepared: 4/22/2024 9:22, Analyzed: 4/22/2024 14:15

Specific Conductance (Lab)	1440		umhos/cm	1410		102	80-120			
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Duplicate (BDD2382-DUP1)

Source: 4042964-41

Prepared: 4/22/2024 9:22, Analyzed: 4/22/2024 14:15

Specific Conductance (Lab)	509	1	umhos/cm		505			0.789	0.938	
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Batch BDD2489 - Default Prep Wet Chem

Blank (BDD2489-BLK1)

Prepared: 4/23/2024 8:18, Analyzed: 4/23/2024 15:09

Chemical Oxygen Demand	ND	13	mg/L							U
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LCS (BDD2489-BS1)

Prepared: 4/23/2024 8:18, Analyzed: 4/23/2024 15:09

Chemical Oxygen Demand	122	13	mg/L	125		97.6	90-110			
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Duplicate (BDD2489-DUP1)

Source: 4042964-11

Prepared: 4/23/2024 8:18, Analyzed: 4/23/2024 15:09

Chemical Oxygen Demand	26	13	mg/L		23			12.2	25	
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Matrix Spike (BDD2489-MS1)

Source: 4042964-11

Prepared: 4/23/2024 8:18, Analyzed: 4/23/2024 15:09

Chemical Oxygen Demand	264	13	mg/L	250	23	96.4	90-110			
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Matrix Spike Dup (BDD2489-MSD1)

Source: 4042964-11

Prepared: 4/23/2024 8:18, Analyzed: 4/23/2024 15:09

Chemical Oxygen Demand	269	13	mg/L	250	23	98.4	90-110	1.88	10	
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Batch BDD2491 - Default Prep Wet Chem

Blank (BDD2491-BLK1)

Prepared: 4/23/2024 8:27, Analyzed: 4/23/2024 15:09

Chemical Oxygen Demand	ND	13	mg/L							U
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Conventional Chemistry Analyses Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDD2491 - Default Prep Wet Chem

LCS (BDD2491-BS1)

Prepared: 4/23/2024 8:27, Analyzed: 4/23/2024 15:09

Chemical Oxygen Demand	125	13	mg/L	125		100	90-110			
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Duplicate (BDD2491-DUP1)

Source: 4042964-23

Prepared: 4/23/2024 8:27, Analyzed: 4/23/2024 15:09

Chemical Oxygen Demand	20	13	mg/L		21			4.88	25	
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Matrix Spike (BDD2491-MS1)

Source: 4042964-23

Prepared: 4/23/2024 8:27, Analyzed: 4/23/2024 15:09

Chemical Oxygen Demand	272	13	mg/L	250	21	100	90-110			
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Matrix Spike Dup (BDD2491-MSD1)

Source: 4042964-23

Prepared: 4/23/2024 8:27, Analyzed: 4/23/2024 15:09

Chemical Oxygen Demand	276	13	mg/L	250	21	102	90-110	1.46	10	
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Batch BDD2492 - Default Prep Wet Chem

Blank (BDD2492-BLK1)

Prepared: 4/23/2024 8:32, Analyzed: 4/23/2024 15:09

Chemical Oxygen Demand	ND	13	mg/L							U
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LCS (BDD2492-BS1)

Prepared: 4/23/2024 8:32, Analyzed: 4/23/2024 15:09

Chemical Oxygen Demand	127	13	mg/L	125		102	90-110			
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Duplicate (BDD2492-DUP1)

Source: 4042964-41

Prepared: 4/23/2024 8:32, Analyzed: 4/23/2024 15:09

Chemical Oxygen Demand	11	13	mg/L		11			0.00	25	J
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Matrix Spike (BDD2492-MS1)

Source: 4042964-41

Prepared: 4/23/2024 8:32, Analyzed: 4/23/2024 15:09

Chemical Oxygen Demand	278	13	mg/L	250	11	107	90-110			
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Matrix Spike Dup (BDD2492-MSD1)

Source: 4042964-41

Prepared: 4/23/2024 8:32, Analyzed: 4/23/2024 15:09

Chemical Oxygen Demand	275	13	mg/L	250	11	106	90-110	1.08	10	
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Conventional Chemistry Analyses Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDD2509 - Default Prep Wet Chem

Blank (BDD2509-BLK1)

Prepared: 4/23/2024 12:06, Analyzed: 4/23/2024 12:06

Total Dissolved Solids	ND	25	mg/L							U
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LCS (BDD2509-BS1)

Prepared: 4/23/2024 12:06, Analyzed: 4/23/2024 12:06

Total Dissolved Solids	88		mg/L	90.0		97.8	80-120			
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Duplicate (BDD2509-DUP1)

Source: 4042964-19

Prepared: 4/23/2024 12:06, Analyzed: 4/23/2024 12:06

Total Dissolved Solids	2560	250	mg/L		2540			0.784	10	
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Duplicate (BDD2509-DUP2)

Source: 4042964-41

Prepared: 4/23/2024 12:06, Analyzed: 4/23/2024 12:06

Total Dissolved Solids	258	50	mg/L		260			0.772	10	
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Batch BDD2657 - Default Prep Wet Chem

Blank (BDD2657-BLK1)

Prepared: 4/25/2024 7:55, Analyzed: 4/25/2024 7:55

Hardness as CaCO ₃	ND	1	mg/L							U
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LCS (BDD2657-BS1)

Prepared: 4/25/2024 7:55, Analyzed: 4/25/2024 7:55

Hardness as CaCO ₃	226	1	mg/L	225		101	80-120			
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Duplicate (BDD2657-DUP1)

Source: 4041944-02

Prepared: 4/25/2024 7:55, Analyzed: 4/25/2024 7:55

Hardness as CaCO ₃	127	1	mg/L		133			4.30	10	
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Matrix Spike (BDD2657-MS1)

Source: 4041944-02

Prepared: 4/25/2024 7:55, Analyzed: 4/25/2024 7:55

Hardness as CaCO ₃	464	1	mg/L	318	133	104	80-120			
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Batch BDD2659 - Default Prep Wet Chem

Blank (BDD2659-BLK1)

Prepared: 4/25/2024 7:55, Analyzed: 4/25/2024 7:55

Hardness as CaCO ₃	ND	1	mg/L							U
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Conventional Chemistry Analyses Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDD2659 - Default Prep Wet Chem

LCS (BDD2659-BS1)

Prepared: 4/25/2024 7:55, Analyzed: 4/25/2024 7:55

Hardness as CaCO ₃	228	1	mg/L	225		101	80-120			
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Duplicate (BDD2659-DUP1)

Source: 4042964-41

Prepared: 4/25/2024 7:55, Analyzed: 4/25/2024 7:55

Hardness as CaCO ₃	177	1	mg/L		174			1.59	10	
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Matrix Spike (BDD2659-MS1)

Source: 4042964-41

Prepared: 4/25/2024 7:55, Analyzed: 4/25/2024 7:55

Hardness as CaCO ₃	497	1	mg/L	318	174	102	80-120			
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Batch BDD2824 - Default Prep Wet Chem

Blank (BDD2824-BLK1)

Prepared: 4/25/2024 11:08, Analyzed: 4/25/2024 22:33

Total Organic Carbon	ND	0.5	mg/L							U
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LCS (BDD2824-BS1)

Prepared: 4/25/2024 11:08, Analyzed: 4/25/2024 22:21

Total Organic Carbon	5.0	0.5	mg/L	5.00		100	80-120			
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Duplicate (BDD2824-DUP1)

Source: 4042964-11

Prepared: 4/25/2024 11:08, Analyzed: 4/26/2024 2:31

Total Organic Carbon	1.9	0.5	mg/L		2.1			7.00	25	
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Duplicate (BDD2824-DUP2)

Source: 4042964-19

Prepared: 4/25/2024 11:08, Analyzed: 4/26/2024 6:28

Total Organic Carbon	1.4	0.5	mg/L		1.3			5.27	25	
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Matrix Spike (BDD2824-MS1)

Source: 4042964-11

Prepared: 4/25/2024 11:08, Analyzed: 4/26/2024 2:55

Total Organic Carbon	4.3	0.5	mg/L	2.50	2.1	90.2	80-120			
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Matrix Spike (BDD2824-MS2)

Source: 4042964-21

Prepared: 4/25/2024 11:08, Analyzed: 4/26/2024 6:48

Total Organic Carbon	6.0	0.5	mg/L	5.00	0.9	102	80-120			
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Conventional Chemistry Analyses Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDD2826 - Default Prep Wet Chem

Blank (BDD2826-BLK1)

Prepared: 4/25/2024 11:10, Analyzed: 4/26/2024 7:01

Total Organic Carbon	ND	0.5	mg/L							U
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LCS (BDD2826-BS1)

Prepared: 4/25/2024 11:10, Analyzed: 4/26/2024 7:15

Total Organic Carbon	5.1	0.5	mg/L	5.00		103	80-120			
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Duplicate (BDD2826-DUP1)

Source: 4041451-01

Prepared: 4/25/2024 11:10, Analyzed: 4/26/2024 10:48

Total Organic Carbon	1.6	0.5	mg/L		1.6			1.40	25	
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Duplicate (BDD2826-DUP2)

Source: 4042964-41

Prepared: 4/25/2024 11:10, Analyzed: 4/26/2024 14:43

Total Organic Carbon	1.6	0.5	mg/L		1.6			3.48	25	
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Matrix Spike (BDD2826-MS1)

Source: 4041451-02

Prepared: 4/25/2024 11:10, Analyzed: 4/26/2024 11:10

Total Organic Carbon	8.2	0.5	mg/L	2.50	5.6	104	80-120			
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Matrix Spike (BDD2826-MS2)

Source: 4042964-43

Prepared: 4/25/2024 11:10, Analyzed: 4/26/2024 14:59

Total Organic Carbon	5.8	0.5	mg/L	5.00	0.4	108	80-120			
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Batch BDD3162 - Default Prep Wet Chem

Blank (BDD3162-BLK1)

Prepared: 4/29/2024 17:40, Analyzed: 4/29/2024 17:40

Carbonate Alkalinity as CaCO ₃	ND	4	mg/L							U
Bicarbonate Alkalinity as CaCO ₃	ND	4	mg/L							U
Total Alkalinity	ND	4	mg/L							U

Blank (BDD3162-BLK2)

Prepared: 4/29/2024 19:12, Analyzed: 4/29/2024 19:12

Bicarbonate Alkalinity as CaCO ₃	ND	4	mg/L							U
Carbonate Alkalinity as CaCO ₃	ND	4	mg/L							U
Total Alkalinity	ND	4	mg/L							U



Conventional Chemistry Analyses Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDD3162 - Default Prep Wet Chem

Blank (BDD3162-BLK3)

Prepared: 4/29/2024 20:37, Analyzed: 4/29/2024 20:37

Carbonate Alkalinity as CaCO ₃	ND	4	mg/L							U
Total Alkalinity	ND	4	mg/L							U
Bicarbonate Alkalinity as CaCO ₃	ND	4	mg/L							U

LCS (BDD3162-BS1)

Prepared: 4/29/2024 19:07, Analyzed: 4/29/2024 19:07

Carbonate Alkalinity as CaCO ₃	ND	4	mg/L	0.00			0-200			U
Total Alkalinity	242	4	mg/L	250		96.6	80-120			
Bicarbonate Alkalinity as CaCO ₃	239	4	mg/L	0.00			0-200			

LCS (BDD3162-BS2)

Prepared: 4/29/2024 20:31, Analyzed: 4/29/2024 20:31

Total Alkalinity	245	4	mg/L	250		98.0	80-120			
Bicarbonate Alkalinity as CaCO ₃	237	4	mg/L	0.00			0-200			
Carbonate Alkalinity as CaCO ₃	ND	4	mg/L	0.00			0-200			U

Duplicate (BDD3162-DUP1)

Source: 4042964-11

Prepared: 4/29/2024 18:52, Analyzed: 4/29/2024 18:52

Total Alkalinity	486	4	mg/L		475			2.41	10	
Carbonate Alkalinity as CaCO ₃	ND	4	mg/L		ND				10	U
Bicarbonate Alkalinity as CaCO ₃	486	4	mg/L		475			2.41	10	

Duplicate (BDD3162-DUP2)

Source: 4042964-37

Prepared: 4/29/2024 20:20, Analyzed: 4/29/2024 20:20

Bicarbonate Alkalinity as CaCO ₃	316	4	mg/L		318			0.883	10	
Carbonate Alkalinity as CaCO ₃	ND	4	mg/L		ND				10	U
Total Alkalinity	316	4	mg/L		318			0.883	10	

Matrix Spike (BDD3162-MS1)

Source: 4042964-11

Prepared: 4/29/2024 18:59, Analyzed: 4/29/2024 18:59

Total Alkalinity	483	4	mg/L	50.0	475	17.4	80-120			M3
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Matrix Spike (BDD3162-MS2)

Source: 4042964-37

Prepared: 4/29/2024 20:25, Analyzed: 4/29/2024 20:25

Total Alkalinity	331	4	mg/L	50.0	318	25.2	80-120			M3
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Conventional Chemistry Analyses Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDD3165 - Default Prep Wet Chem

Blank (BDD3165-BLK1)

Prepared: 4/29/2024 20:49, Analyzed: 4/29/2024 20:49

Carbonate Alkalinity as CaCO ₃	ND	4	mg/L							U
Bicarbonate Alkalinity as CaCO ₃	ND	4	mg/L							U
Total Alkalinity	ND	4	mg/L							U

Blank (BDD3165-BLK2)

Prepared: 4/29/2024 21:56, Analyzed: 4/29/2024 21:56

Bicarbonate Alkalinity as CaCO ₃	ND	4	mg/L							U
Total Alkalinity	ND	4	mg/L							U
Carbonate Alkalinity as CaCO ₃	ND	4	mg/L							U

Blank (BDD3165-BLK3)

Prepared: 4/29/2024 22:23, Analyzed: 4/29/2024 22:23

Bicarbonate Alkalinity as CaCO ₃	ND	4	mg/L							U
Carbonate Alkalinity as CaCO ₃	ND	4	mg/L							U
Total Alkalinity	ND	4	mg/L							U

LCS (BDD3165-BS1)

Prepared: 4/29/2024 21:50, Analyzed: 4/29/2024 21:50

Bicarbonate Alkalinity as CaCO ₃	246	4	mg/L	0.00			0-200			
Total Alkalinity	246	4	mg/L	250		98.4	80-120			
Carbonate Alkalinity as CaCO ₃	ND	4	mg/L	0.00			0-200			U

LCS (BDD3165-BS2)

Prepared: 4/29/2024 22:18, Analyzed: 4/29/2024 22:18

Bicarbonate Alkalinity as CaCO ₃	242	4	mg/L	0.00			0-200			
Total Alkalinity	244	4	mg/L	250		97.7	80-120			
Carbonate Alkalinity as CaCO ₃	ND	4	mg/L	0.00			0-200			U

Duplicate (BDD3165-DUP1)

Source: 4042964-41

Prepared: 4/29/2024 21:42, Analyzed: 4/29/2024 21:42

Total Alkalinity	146	4	mg/L		147			0.889	10	
Carbonate Alkalinity as CaCO ₃	ND	4	mg/L		ND				10	U
Bicarbonate Alkalinity as CaCO ₃	146	4	mg/L		147			0.889	10	



Conventional Chemistry Analyses Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDD3165 - Default Prep Wet Chem

Duplicate (BDD3165-DUP2)

Source: 4045239-03

Prepared: 4/29/2024 22:11, Analyzed: 4/29/2024 22:11

Carbonate Alkalinity as CaCO ₃	ND	4	mg/L		ND				10	U
Total Alkalinity	128	4	mg/L		126			2.20	10	
Bicarbonate Alkalinity as CaCO ₃	128	4	mg/L		126			2.20	10	

Matrix Spike (BDD3165-MS1)

Source: 4042964-41

Prepared: 4/29/2024 21:46, Analyzed: 4/29/2024 21:46

Total Alkalinity	178	4	mg/L	50.0	147	62.2	80-120			M3
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Matrix Spike (BDD3165-MS2)

Source: 4045239-03

Prepared: 4/29/2024 22:14, Analyzed: 4/29/2024 22:14

Total Alkalinity	161	4	mg/L	50.0	126	70.4	80-120			M3
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Batch BDE2142 - Default Prep Wet Chem

Blank (BDE2142-BLK1)

Prepared: 5/17/2024 18:57, Analyzed: 5/17/2024 18:57

Total Dissolved Solids	ND	25	mg/L							U
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LCS (BDE2142-BS1)

Prepared: 5/17/2024 18:57, Analyzed: 5/17/2024 18:57

Total Dissolved Solids	88		mg/L	90.0		97.8	80-120			
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Duplicate (BDE2142-DUP1)

Source: 4054791-01

Prepared: 5/17/2024 18:57, Analyzed: 5/17/2024 18:57

Total Dissolved Solids	308	25	mg/L		318			3.19	10	
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Ion Chromatography Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDD2993 - Default Prep IC

Blank (BDD2993-BLK1)

Prepared: 4/27/2024 3:35, Analyzed: 4/27/2024 3:35

Fluoride	ND	0.20	mg/L							U
Sulfate	ND	1.0	mg/L							U
Chloride	ND	0.5	mg/L							U

LCS (BDD2993-BS1)

Prepared: 4/27/2024 3:08, Analyzed: 4/27/2024 3:08

Fluoride	5.31		mg/L	5.00		106	90-110			
Chloride	13.5		mg/L	12.5		108	90-110			
Sulfate	25.4		mg/L	25.0		102	90-110			

Matrix Spike (BDD2993-MS1)

Source: 4042964-11

Prepared: 4/27/2024 2:13, Analyzed: 4/27/2024 2:13

Chloride	792		mg/L	250	688	41.9	80-120			D, M2
Fluoride	27.8		mg/L	100	0.15	27.6	80-120			D, M2
Sulfate	4330		mg/L	500	4070	52.1	80-120			D, M2

Matrix Spike Dup (BDD2993-MSD1)

Source: 4042964-11

Prepared: 4/27/2024 2:41, Analyzed: 4/27/2024 2:41

Fluoride	42.0		mg/L	100	0.15	41.8	80-120	40.8	20	D, M2, Y5
Sulfate	3960		mg/L	500	4070	NR	80-120	8.96	20	D, M2
Chloride	755		mg/L	250	688	26.8	80-120	4.86	10	D, M2

Batch BDD3022 - Default Prep IC

Blank (BDD3022-BLK1)

Prepared: 4/27/2024 4:29, Analyzed: 4/27/2024 4:29

Chloride	ND	0.5	mg/L							U
Fluoride	ND	0.20	mg/L							U
Sulfate	0.3	1.0	mg/L							

LCS (BDD3022-BS1)

Prepared: 4/27/2024 4:04, Analyzed: 4/27/2024 4:04

Sulfate	25.2		mg/L	25.0		101	90-110			
Chloride	13.2		mg/L	12.5		105	90-110			
Fluoride	4.95		mg/L	5.00		98.9	90-110			



Ion Chromatography Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDD3022 - Default Prep IC

Matrix Spike (BDD3022-MS1)

Source: 4042964-27

Prepared: 4/27/2024 3:13, Analyzed: 4/27/2024 3:13

Fluoride	98.4		mg/L	100	0.19	98.2	80-120			D
Chloride	290		mg/L	250	10.6	112	80-120			D
Sulfate	846		mg/L	500	809	7.39	80-120			D, M2

Matrix Spike Dup (BDD3022-MSD1)

Source: 4042964-27

Prepared: 4/27/2024 3:39, Analyzed: 4/27/2024 3:39

Chloride	271		mg/L	250	10.6	104	80-120	6.65	10	D
Fluoride	95.7		mg/L	100	0.19	95.5	80-120	2.78	20	D
Sulfate	805		mg/L	500	809	NR	80-120	5.02	20	D, M2

Batch BDD3176 - Default Prep IC

Blank (BDD3176-BLK1)

Prepared: 4/30/2024 6:33, Analyzed: 4/30/2024 6:33

Fluoride	ND	0.20	mg/L							U
Chloride	ND	0.5	mg/L							U
Sulfate	ND	1.0	mg/L							U

LCS (BDD3176-BS1)

Prepared: 4/30/2024 6:06, Analyzed: 4/30/2024 6:06

Chloride	12.1		mg/L	12.5		97.2	90-110			
Sulfate	23.8		mg/L	25.0		95.0	90-110			
Fluoride	4.84		mg/L	5.00		96.8	90-110			

Matrix Spike (BDD3176-MS1)

Source: 4042964-41

Prepared: 4/30/2024 3:49, Analyzed: 4/30/2024 3:49

Sulfate	546		mg/L	500	65.6	96.1	80-120			D
Fluoride	99.0		mg/L	100	0.27	98.7	80-120			D
Chloride	250		mg/L	250	9.8	96.0	80-120			D

Matrix Spike Dup (BDD3176-MSD1)

Source: 4042964-41

Prepared: 4/30/2024 4:16, Analyzed: 4/30/2024 4:16

Fluoride	100		mg/L	100	0.27	100	80-120	1.32	20	D
Chloride	244		mg/L	250	9.8	93.5	80-120	2.52	10	D
Sulfate	542		mg/L	500	65.6	95.4	80-120	0.628	20	D



Certified Analyses included in this Report

Analyte	Certifications
2320 B-2011 in Water	
Bicarbonate Alkalinity as CaCO ₃	KY Drinking Water Mdv (00030) TN Drinking Water (02819) VA NELAC MDV (460210)
Carbonate Alkalinity as CaCO ₃	KY Drinking Water Mdv (00030) TN Drinking Water (02819) VA NELAC MDV (460210)
Total Alkalinity	KY Drinking Water Mdv (00030) KY Wastewater Mdv (00030) TN Drinking Water (02819) VA NELAC MDV (460210) MS Drinking Water MADV
2340 C (as HACH 8226) in Water	
Hardness as CaCO ₃	KY Wastewater Mdv (00030) TN Drinking Water (02819) VA NELAC MDV (460210)
2510 B-2011 in Water	
Specific Conductance (Lab)	KY Drinking Water Mdv (00030) VA NELAC MDV (460210) TN Drinking Water (02819) WV Wastewater Madisonville (241), 825 Industrial Rd Madisonville, KY 42431 FL Drinking Water Mdv (E871159)
2540 C-2015 in Water	
Total Dissolved Solids	KY Drinking Water Mdv (00030) VA NELAC MDV (460210) KY Wastewater Mdv (00030) TN Drinking Water (02819) WV Wastewater Madisonville (241), 825 Industrial Rd Madisonville, KY 42431 MS Drinking Water MADV
5310 C-2014 in Water	
Total Organic Carbon	KY Drinking Water Mdv (00030) VA NELAC MDV (460210) KY Wastewater Mdv (00030) TN Drinking Water (02819) ADEM Drinking Water Mdv (41880) WV Wastewater Madisonville (241), 825 Industrial Rd Madisonville, KY 42431 MS Drinking Water MADV
EPA 245.7 REV 2 in Water	
Mercury	VA NELAC MDV (460210) KY Wastewater Mdv (00030)
Mercury	VA NELAC MDV (460210) KY Wastewater Mdv (00030) WV Wastewater Madisonville (241), 825 Industrial Rd Madisonville, KY 42431
EPA 300.0 REV 2.1 in Water	
Chloride	KY Drinking Water Mdv (00030) KY Wastewater Mdv (00030) TN Drinking Water (02819) WV Wastewater Madisonville (241), 825 Industrial Rd Madisonville, KY 42431 MS Drinking Water MADV VA NELAC MDV (460210)
Fluoride	KY Drinking Water Mdv (00030) IN Drinking Water Mdv (C-KY-02) KY Wastewater Mdv (00030) WV Drinking Water Mdv (9959 M) TN Drinking Water (02819) ADEM Drinking Water Mdv (41880) WV Wastewater Madisonville (241), 825 Industrial Rd Madisonville, KY 42431 VA NELAC MDV (460210) MS Drinking Water MADV
Sulfate	KY Drinking Water Mdv (00030) VA NELAC MDV (460210) KY Wastewater Mdv (00030) TN Drinking Water (02819) WV Wastewater Madisonville (241), 825 Industrial Rd Madisonville, KY 42431
HACH 8000 in Water	
Chemical Oxygen Demand	KY Wastewater Mdv (00030) VA NELAC MDV (460210) WV Wastewater Madisonville (241), 825 Industrial Rd Madisonville, KY 42431
SW846 6010 B in Water	
Calcium	VA NELAC MDV (460210)



Sample Acceptance Checklist for Work Order 4042964

Shipped By: Client

Temperature: 0.80° Celcius

Condition

Check if Custody Seals are Present/Intact	☐
Check if Custody Signatures are Present	☒
Check if Collector Signature Present	☒
Check if bottles are intact	☒
Check if bottles are correct	☒
Check if bottles have sufficient volume	☒
Check if samples received on ice	☒
Check if VOA headspace is acceptable	☐
Check if samples received in holding time.	☒
Check if samples are preserved properly	☒

Chain of Custody

Scheduled for: **04/17/2024**



Client: **Big Rivers Electric Corporation Wilson Station**

Project: **Wilson Groundwater Wells 092-00004**

Report To:

Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Phone: (270) 844-6000

PWS ID#:

State: KY

Invoice To:

Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

PO#: _____

Quote# _____

Please Print Legibly

Collected by (Signature): Ashley Hall

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY

required information

Workorder #

4042964

Sample ID#

Date

(mm/dd/yy):

Collection

Time (24 hr):

Bottle and Preservative

Containers

Sample Description

Composite

Sample Analysis Requested

4042964-01 A

04/17/24 0710

Plastic 1L

1

MW1

g / c

Alkalinity Bicarbonate Alkalinity
Carbonate TDS Sulfate 300.0
Alkalinity Total Conductivity (Lab)
Chloride 300.0 Fluoride 300.0
Chromium Tot 6020 Arsenic Tot
6020 Calcium Tot 6010B Cadmium
Tot 6020 Boron Tot 6010B Barium
Tot 6020 Lead Tot 6020 Antimony
Tot 6020 Beryllium Tot 6020 Cobalt
Tot 6020 Copper Tot 6020 Iron Tot
6010B Zinc Tot 6020 Lithium Tot
6020 Magnesium Tot 6010B

4042964-01 B

04/17/24 0710

Plastic 500mL pH<2
w/HNO3

1

MW1

g / c

4042964-01 C

04/17/24 0710

Plastic 500mL pH<2
w/H2SO4

1

MW1

g / c

COD TOC

4042964-01 D

04/17/24 0710

CG 250mL pH<2 w/HCL

1

MW1

g / c

Mercury Tot 245.7

4042964-01 E

04/17/24 0710

CG 250mL pH<2 w/HCL

1

MW1

g / c

Mercury Tot 245.7

Preservation Check: pH: ✓

Preservation Check: pH: ✓

Preservation Check Performed by: KED

pH Paper Lot #: 228022

Field data collected by: Ashley Hall

Date (mm/dd/yy) 04/17/24

Time (24 hr) 0710

pH 5.82

Cond (uMm) 3.72

Res Cl (mg/L) _____

Tot Cl (mg/L) _____

Free Cl (mg/L) _____

Temp (oC) 16.38

or

(oF) _____

Static Water Level _____

DO (mg/L) _____

Turb. (NTU) _____

Flow: _____

☐ MGD

☐ CFS

☐ g/min

☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Ashley Hall
[Signature]

[Signature]
[Signature]

4-17-24

12:48

4-19-24

1137



PACE- Check here if trip charge applied to associated COC

Printed: 4/8/2024 9:35:38AM

Page 88 of 160

Chain of Custody

Scheduled for: **04/17/2024**



Client: **Big Rivers Electric Corporation Wilson Station**

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: **Wilson Groundwater Wells 092-00004**

Phone: (270) 844-6000
PWS ID#:
State: KY

PO#: _____
Quote# _____

Please Print Legibly

Collected by (Signature): Asbury Hall
required information

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY

required information

Workorder #

Date Collection
(mm/dd/yy): Time (24 hr):

4042964

Sample ID#

Bottle and Preservative

Containers

Sample Description

Composite

Sample Analysis Requested

4042964-01 F

04/17/24 0710

Plastic 1L pH<2 w/HNO3
Rad 226 (Sub)

1

MW1

g / c

Radium 226 (sub)

Preservation Check: pH: ✓

4042964-01 G

04/17/24 0710

Plastic 1L pH<2 w/HNO3
Rad 228 (Sub)

1

MW1

g / c

Radium 228 (sub)

Preservation Check: pH: ✓

4042964-01 H

04/17/24 0710

Plastic 1L pH<2 w/HNO3
Rad 228 (Sub)

1

MW1

g / c

Radium 228 (sub)

Preservation Check: pH: ✓

4042964-01 I

04/17/24 0710

Plastic 1L pH<2 w/HNO3
(Sub)

1

MW1

g / c

Radium Total (sub)

Preservation Check: pH: ✓

4042964-01 J

04/17/24 0710

AG 250mL pH<2
w/H2SO4

1

MW1

g / c

TOC

Preservation Check: pH: ✓

4042964-02 A

04/17/24 0710

CG 250mL pH<2 w/HCl
Field Blank

1

Mercury Field Blank
MW-1

g / c

Mercury Tot 245.7 Field Blank

Preservation Check Performed by: KED

pH Paper Lot #: 028022

Field data collected by: Asbury Hall

Date (mm/dd/yy) 04/17/24 Time (24 hr) 0710

pH 5.82 Cond (uS/cm) 3.72 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____

Temp (oC) 10.38 or (oF) _____ Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____

Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Asbury Hall

Tim. Smith
Ken De

4-17-24
4-17-24

1248
1137



PACE- Check here if trip charge applied to associated COC

Printed: 4/8/2024 9:35:38AM

Page 89 of 160

Chain of Custody

Scheduled for: 04/17/2024



Client: Big Rivers Electric Corporation Wilson Station

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: Wilson Groundwater Wells 092-00004

Phone: (270) 844-6000
PWS ID#:
State: KY

PO#:
Quote#

Please Print Legibly

Collected by (Signature): Dave Medley
required information*

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY Workorder # 4042964 Sample ID#	*required information*		Bottle and Preservative	Containers	Sample Description	Composite	Sample Analysis Requested
	Date (mm/dd/yy):	Collection Time (24 hr):					
4042964-03 A	<u>4-17-24</u> 04/17/24	<u>1110</u>	Plastic 1L	1	MW2	g / c	Alkalinity Bicarbonate Alkalinity Carbonate TDS Sulfate 300.0 Alkalinity Total Conductivity (La) Chloride 300.0 Fluoride 300.0
4042964-03 B	<u>04/17/24</u>	<u>1110</u>	Plastic 500mL pH<2 w/HNO3	1	MW2	g / c	Chromium Tot 6020 Arsenic Tot 6020 Calcium Tot 6010B Cadmium Tot 6020 Boron Tot 6010B Barium Tot 6020 Lead Tot 6020 Antimony Tot 6020 Beryllium Tot 6020 Cobalt Tot 6020 Copper Tot 6020 Iron Tot 6010B Zinc Tot 6020 Lithium Tot 6020 Magnesium Tot 6010B
Preservation Check: pH: <u>✓</u>							
4042964-03 C	<u>04/17/24</u>	<u>1110</u>	Plastic 500mL pH<2 w/H2SO4	1	MW2	g / c	COD TOC
Preservation Check: pH: <u>✓</u>							
4042964-03 D	<u>04/17/24</u>	<u>1110</u>	CG 250mL pH<2 w/HCL	1	MW2	g / c	Mercury Tot 245.7
4042964-03 E	<u>04/17/24</u>	<u>1110</u>	CG 250mL pH<2 w/HCL	1	MW2	g / c	Mercury Tot 245.7

Preservation Check Performed by: KED

pH Paper Lot #: 228022

Field data collected by: Dave Medley Date (mm/dd/yy) 04/17/24 Time (24 hr) 1110
pH 6.76 Cond (umho) 0.79 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____
Temp (oC) 21.95 or (oF) _____ Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____
Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Dave Medley
Ken De

Ken De
Ken De

4-17-24
4-19-24
1248
1137

Chain of Custody

Scheduled for: **04/17/2024**



Client: **Big Rivers Electric Corporation Wilson Station**

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: **Wilson Groundwater Wells 092-00004**

Phone: (270) 844-6000
PWS ID#:
State: KY

PO#:
Quote#

Please Print Legibly

Collected by (Signature): Dave Medley
required information

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date 4/17/24 Start time 11:10 End Date 4/17/24 End Time 11:37 Temp (oC) 21.95

Effluent: Start Date 4/17/24 Start time 11:10 End Date 4/17/24 End Time 11:37 Temp (oC) 21.95

LAB USE ONLY Workorder # 4042964 Sample ID#	*required information* Date (mm/dd/yy): 04/17/24	Collection Time (24 hr): 1110	Bottle and Preservative	Containers	Sample Description	Composite	Sample Analysis Requested
4042964-03 F	04/17/24	1110	Plastic 1L pH<2 w/HNO3 Rad 226 (Sub)	1	MW2	g / c	Radium 226 (sub)
Preservation Check: pH: <u>✓</u>							
4042964-03 G	04/17/24	1110	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW2	g / c	Radium 228 (sub)
Preservation Check: pH: <u>✓</u>							
4042964-03 H	04/17/24	1110	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW2	g / c	Radium 228 (sub)
Preservation Check: pH: <u>✓</u>							
4042964-03 I	04/17/24	1110	Plastic 1L pH<2 w/HNO3 (Sub)	1	MW2	g / c	Radium Total (sub)
Preservation Check: pH: <u>✓</u>							
4042964-03 J	04/17/24	1110	AG 250mL pH<2 w/H2SO4	1	MW2	g / c	TOC
Preservation Check: pH: <u>✓</u>							
4042964-04 A	04/17/24	1110	CG 250mL pH<2 w/HCl Field Blank	1	Mercury Field Blank MW-2	g / c	Mercury Tot 245.7 Field Blank

Preservation Check Performed by: ICCD

pH Paper Lot #: 228022

Field data collected by: Dave Medley Date (mm/dd/yy) 04/17/24 Time (24 hr) 1110
pH 6.76 Cond (umho) 0.79 Res Cl (mg/L) Tot Cl (mg/L) Free Cl (mg/L)
Temp (oC) 21.95 or (oF) Static Water Level DO (mg/L) Turb. (NTU)
Flow: ☐MGD ☐CFS ☐g/min ☐GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Dave Medley
Travis Bond

Travis Bond
Travis Bond

4-17-24
4-19-24

1248
1137

Chain of Custody

Scheduled for: 04/17/2024



Client: Big Rivers Electric Corporation Wilson Station

Report To:

Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:

Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: Wilson Groundwater Wells 092-00004

Phone: (270) 844-6000

PWS ID#:

State: ky

PO#:

Quote#

Please Print Legibly

Collected by (Signature): Rachel H Collins

Compliance Monitoring? Yes ☐ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☐

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY

required information

Workorder #

Date Collection

4042964

(mm/dd/yy): Time (24 hr):

Bottle and Preservative

Containers

Sample Description

Composite

Sample Analysis Requested

Sample ID#

4042964-05 A

04.17.24

11:10

Plastic 1L

1

MW3

g / c

Alkalinity Bicarbonate Alkalinity
Carbonate TDS Sulfate 300.0
Alkalinity Total Conductivity (Lab)
Chloride 300.0 Fluoride 300.0
Chromium Tot 6020 Arsenic Tot
6020 Calcium Tot 6010B Cadmium
Tot 6020 Boron Tot 6010B Barium
Tot 6020 Lead Tot 6020 Antimony
Tot 6020 Beryllium Tot 6020 Cobalt
Tot 6020 Copper Tot 6020 Iron Tot
6010B Zinc Tot 6020 Lithium Tot:
6020 Magnesium Tot 6010B

4042964-05 B

04.17.24

11:10

Plastic 500mL pH<2
w/HNO3

1

MW3

g / c

4042964-05 C

04.17.24

11:10

Plastic 500mL pH<2
w/H2SO4

1

MW3

g / c

COD TOC

4042964-05 D

04.17.24

11:10

CG 250mL pH<2 w/HCL

1

MW3

g / c

Mercury Tot 245.7

4042964-05 E

04.17.24

11:10

CG 250mL pH<2 w/HCL

1

MW3

g / c

Mercury Tot 245.7

Preservation Check: pH: ✓

Preservation Check: pH: ✓

Preservation Check Performed by: KED

pH Paper Lot #: 228022

Field data collected by: Rachel H Collins

Date (mm/dd/yy) 04.17.24 Time (24 hr) 11:10

pH 6.65 Cond (uS) 1.81 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____

Temp (oC) 21.37 or (oF) _____ Static Water Level _____ DO (mg/L) 0.83 Turb. (NTU) 9.7

Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Rachel H Collins

Tim [Signature]

4-17-24

12:48

Tim [Signature]

Ken [Signature]

4-17-24

11:37

Chain of Custody

Scheduled for: **04/17/2024**



Client: **Big Rivers Electric Corporation Wilson Station**

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: **Wilson Groundwater Wells 092-00004**

Phone: (270) 844-6000

PWS ID#:

State: KY

PO#:

Quote#

Please Print Legibly

Collected by (Signature): Rachelle H Collins

Compliance Monitoring? Yes ☐ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☐

Influent: Start Date 04-17-24 Start time 11:10 End Date 04-17-24 End Time 11:10 Temp (oC) 21.37

Effluent: Start Date 04-17-24 Start time 11:10 End Date 04-17-24 End Time 11:10 Temp (oC) 21.37

LAB USE ONLY

required information

Workorder #	Date (mm/dd/yy)	Collection Time (24 hr)	Bottle and Preservative	Containers	Sample Description	Composite	Sample Analysis Requested
4042964	04-17-24	11:10	Plastic 1L pH<2 w/HNO3 Rad 226 (Sub)	1	MW3	g / c	Radium 226 (sub)
4042964-05 F	04-17-24	11:10	Plastic 1L pH<2 w/HNO3 Rad 226 (Sub)	1	MW3	g / c	Radium 226 (sub)
4042964-05 G	04-17-24	11:10	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW3	g / c	Radium 228 (sub)
4042964-05 H	04-17-24	11:10	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW3	g / c	Radium 228 (sub)
4042964-05 I	04-17-24	11:10	Plastic 1L pH<2 w/HNO3 (Sub)	1	MW3	g / c	Radium Total (sub)
4042964-05 J	04-17-24	11:10	AG 250mL pH<2 w/H2SO4	1	MW3	g / c	TOC
4042964-06 A	04-17-24	11:10	CG 250mL pH<2 w/HCl Field Blank	1	Mercury Field Blank MW-3	g / c	Mercury Tot 245.7 Field Blank

Preservation Check Performed by: KEID

pH Paper Lot #: 228022

Field data collected by: Rachelle H Collins Date (mm/dd/yy) 04-17-24 Time (24 hr) 11:10
pH 6.65 Cond (uM) 1.81 Res Cl (mg/L) 0.83 Tot Cl (mg/L) 9.7 Free Cl (mg/L) 0.83
Temp (oC) 21.37 or (oF) 70.5 Static Water Level 0.83 DO (mg/L) 0.83 Turb. (NTU) 9.7
Flow: ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Rachelle H Collins
Toni

Toni
KEID

4-17-24
4-17-24
1248
1137



PACE- Check here if trip charge applied to associated COC

Printed: 4/8/2024 9:35:38AM

Page 93 of 160

Chain of Custody

Scheduled for: **04/17/2024**



Client: **Big Rivers Electric Corporation Wilson Station**

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: **Wilson Groundwater Wells 092-00004**

Phone: (270) 844-6000
PWS ID#:
State: **KY**

PO#:
Quote#

Please Print Legibly

Collected by (Signature): *Asimiy Hall* *required information*

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY

required information

Workorder #

Date Collection

4042964

(mm/dd/yy): Time (24 hr):

Bottle and Preservative

Containers

Sample Description

Composite

Sample Analysis Requested

Sample ID#

4042964-07 A

04/17/24 0825

Plastic 1L

1

MW4

g / c

Alkalinity Bicarbonate Alkalinity:
Carbonate TDS Sulfate 300.0
Alkalinity Total Conductivity (Lab)
Chloride 300.0 Fluoride 300.0
Chromium Tot 6020 Arsenic Tot
6020 Calcium Tot 6010B Cadmium
Tot 6020 Boron Tot 6010B Barium
Tot 6020 Lead Tot 6020 Antimony
Tot 6020 Beryllium Tot 6020 Cobalt
Tot 6020 Copper Tot 6020 Iron Tot
6010B Zinc Tot 6020 Lithium Tot
6020 Magnesium Tot 6010B

4042964-07 B

04/17/24 0825

Plastic 500mL pH<2
w/HNO3

1

MW4

g / c

4042964-07 C

04/17/24 0825

Plastic 500mL pH<2
w/H2SO4

1

MW4

g / c

COD TOC

4042964-07 D

04/17/24 0825

CG 250mL pH<2 w/HCL

1

MW4

g / c

Mercury Tot 245.7

4042964-07 E

04/17/24 0825

CG 250mL pH<2 w/HCL

1

MW4

g / c

Mercury Tot 245.7

Preservation Check Performed by: *KEC*

pH Paper Lot #: *228022*

Field data collected by: *Asimiy Hall*

Date (mm/dd/yy) *04/17/24*

Time (24 hr) *0825*

pH *6.24*

Cond (umho) *289*

Res Cl (mg/L)

Tot Cl (mg/L)

Free Cl (mg/L)

Temp (oC) *16.53*

or (oF)

Static Water Level

DO (mg/L)

Turb. (NTU)

Flow: _____

☐ MGD

☐ CFS

☐ g/min

☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Asimiy Hall
Tim

Tim
Tim

4-17-24
4-19-24

1248
1137



PACE- Check here if trip charge applied to associated COC

Printed: 4/8/2024 9:35:38AM

Page 94 of 160

Chain of Custody

Scheduled for: **04/17/2024**



Client: **Big Rivers Electric Corporation Wilson Station**

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: **Wilson Groundwater Wells 092-00004**

Phone: (270) 844-6000
PWS ID#:
State: KY

PO#: _____
Quote# _____

Please Print Legibly

Collected by (Signature): Asbury Hall

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY

required information

Workorder #	Date	Collection	Bottle and Preservative	Containers	Sample Description	Composite	Sample Analysis Requested
4042964	(mm/dd/yy):	Time (24 hr):					
Sample ID#							
4042964-07 F	<u>04/17/24</u>	<u>0825</u>	Plastic 1L pH<2 w/HNO3 Rad 226 (Sub)	1	MW4	g / c	Radium 226 (sub)
			Preservation Check: pH: <u>✓</u>				
4042964-07 G	<u>04/17/24</u>	<u>0825</u>	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW4	g / c	Radium 228 (sub)
			Preservation Check: pH: <u>✓</u>				
4042964-07 H	<u>04/17/24</u>	<u>0825</u>	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW4	g / c	Radium 228 (sub)
			Preservation Check: pH: <u>✓</u>				
4042964-07 I	<u>04/17/24</u>	<u>0825</u>	Plastic 1L pH<2 w/HNO3 (Sub)	1	MW4	g / c	Radium Total (sub)
			Preservation Check: pH: <u>✓</u>				
4042964-07 J	<u>04/17/24</u>	<u>0825</u>	AG 250mL pH<2 w/H2SO4	1	MW4	g / c	TOC
			Preservation Check: pH: <u>✓</u>				
4042964-08 A	<u>04/17/24</u>	<u>0825</u>	CG 250mL pH<2 w/HCl Field Blank	1	Mercury Field Blank MW-4	g / c	Mercury Tot 245.7 Field Blank

Preservation Check Performed by: JKED

pH Paper Lot #: 228022

Field data collected by: Asbury Hall Date (mm/dd/yy) 04/17/24 Time (24 hr) 0825
pH 6.24 Cond (umho) 289 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____
Temp (oC) 16.53 or (oF) ms Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____
Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Asbury Hall
[Signature]

[Signature]
[Signature]

4-17-24
4-17-24

1248
1137

Chain of Custody
Scheduled for: 04/17/2024



Client: Big Rivers Electric Corporation Wilson Station

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station

Project: Wilson Groundwater Wells 092-00004

Dawn Storckman
PO Box 24
Henderson, KY 42419

Phone: (270) 844-6000

PWS ID#:

State: KY

PO#: _____

Quote# _____

Please Print Legibly

Collected by (Signature): Asley Hall

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY		*required information*		Bottle and Preservative	Containers	Sample Description	Composite	Sample Analysis Requested
Workorder #	Date	Collection	Time (24 hr):					
4042964	(mm/dd/yy):	Time (24 hr):						
Sample ID#								
4042964-09 A	04/17/24	0945		Plastic 1L	1	MW4D	g / c	Alkalinity Bicarbonate Alkalinity Carbonate TDS Sulfate 300.0 Alkalinity Total Conductivity (Lao) Chloride 300.0 Fluoride 300.0
4042964-09 B	04/17/24	0945		Plastic 500mL pH<2 w/HNO3	1	MW4D	g / c	Chromium Tot 6020 Arsenic Tot 6020 Calcium Tot 6010B Cadmium Tot 6020 Boron Tot 6010B Barium Tot 6020 Lead Tot 6020 Antimony Tot 6020 Beryllium Tot 6020 Cobalt Tot 6020 Copper Tot 6020 Iron Tot 6010B Zinc Tot 6020 Lithium Tct 6020 Magnesium Tot 6010B
				Preservation Check: pH: ☒				
4042964-09 C	04/17/24	0945		Plastic 500mL pH<2 w/H2SO4	1	MW4D	g / c	COD TOC
				Preservation Check: pH: ☒				
4042964-09 D	04/17/24	0945		CG 250mL pH<2 w/HCL	1	MW4D	g / c	Mercury Tot 245.7
4042964-09 E	04/17/24	0945		CG 250mL pH<2 w/HCL	1	MW4D	g / c	Mercury Tot 245.7

Preservation Check Performed by: KED

pH Paper Lot #: 228022

Field data collected by: Asley Hall Date (mm/dd/yy): 04/17/24 Time (24 hr): 0945

pH 6.11 Cond (umho/cm) 4.88 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____

Temp (oC) 18.24 or (oF) _____ Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____

Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Asley Hall
[Signature]

[Signature]
[Signature]

4-17-24
4-17-24

1248
1137

Chain of Custody

Scheduled for: **04/17/2024**



Client: **Big Rivers Electric Corporation Wilson Station**

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: **Wilson Groundwater Wells 092-00004**

Phone: (270) 844-6000
PWS ID#:
State: KY

PO#: _____
Quote# _____

Please Print Legibly

Collected by (Signature): Ashley Hall

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY		*required information*		Containers	Sample Description	Composite	Sample Analysis Requested
Workorder #	Date	Collection	Bottle and Preservative				
4042964	(mm/dd/yy):	Time (24 hr):					
Sample ID#							
4042964-09 F	<u>04/17/24</u>	<u>0945</u>	Plastic 1L pH<2 w/HNO3 Rad 226 (Sub)	1	MW4D	g / c	Radium 226 (sub)
			Preservation Check: pH : <u>✓</u>				
4042964-09 G	<u>04/17/24</u>	<u>0945</u>	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW4D	g / c	Radium 228 (sub)
			Preservation Check: pH : <u>✓</u>				
4042964-09 H	<u>04/17/24</u>	<u>0945</u>	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW4D	g / c	Radium 228 (sub)
			Preservation Check: pH : <u>✓</u>				
4042964-09 I	<u>04/17/24</u>	<u>0945</u>	Plastic 1L pH<2 w/HNO3 (Sub)	1	MW4D	g / c	Radium Total (sub)
			Preservation Check: pH : <u>✓</u>				
4042964-09 J	<u>04/17/24</u>	<u>0945</u>	AG 250mL pH<2 w/H2SO4	1	MW4D	g / c	TOC
			Preservation Check: pH : <u>✓</u>				
4042964-10 A	<u>04/17/24</u>	<u>0945</u>	CG 250mL pH<2 w/HCl Field Blank	1	Mercury Field Blank MW-4D	g / c	Mercury Tot 245.7 Field Blank

Preservation Check Performed by: KED

pH Paper Lot #: 228022

Field data collected by: Ashley Hall Date (mm/dd/yy) 04/17/24 Time (24 hr) 0945
pH 6.11 Cond (umho/cm) 4.88 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____
Temp (oC) 18.24 or (oF) _____ Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____
Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Ashley Hall
KED

[Signature]
[Signature]

4-17-24
4-17-24

1248
1130



Chain of Custody

Scheduled for: **04/17/2024**



Client: **Big Rivers Electric Corporation Wilson Station**

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: **Wilson Groundwater Wells 092-00004**

Phone: (270) 844-6000

PWS ID#:

State: KY

PO#:

Quote#

Please Print Legibly

Collected by (Signature): Rachelle H Collins
required information

Compliance Monitoring? Yes ☐ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☐

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY

required information

Workorder #

Date

Collection

4042964

(mm/dd/yy):

Time (24 hr):

Bottle and Preservative

Containers

Sample Description

Composite

Sample Analysis Requested

Sample ID#

04.17.24

07:30

Plastic 1L

1

MW5

g / c

Alkalinity Bicarbonate Alkalinity
Carbonate TDS Sulfate 300.0
Alkalinity Total Conductivity (Lab)
Chloride 300.0 Fluoride 300.0
Chromium Tot 6020 Arsenic To:
6020 Calcium Tot 6010B Cadmium
Tot 6020 Boron Tot 6010B Barium
Tot 6020 Lead Tot 6020 Antimony
Tot 6020 Beryllium Tot 6020 Cobalt
Tot 6020 Copper Tot 6020 Iron Tot
6010B Zinc Tot 6020 Lithium Tct
6020 Magnesium Tot 6010B

4042964-11 B

04.17.24

07:30

Plastic 500mL pH<2
w/HNO3

1

MW5

g / c

4042964-11 C

04.17.24

07:30

Plastic 500mL pH<2
w/H2SO4

1

MW5

g / c

COD TOC

4042964-11 D

04.17.24

07:30

CG 250mL pH<2 w/HCL

1

MW5

g / c

Mercury Tot 245.7

4042964-11 E

04.17.24

07:30

CG 250mL pH<2 w/HCL

1

MW5

g / c

Mercury Tot 245.7

Preservation Check Performed by: KED

pH Paper Lot #: 228022

Field data collected by: Rachelle H Collins

Date (mm/dd/yy) 04.17.24 Time (24 hr) 07:30

pH 6.30 Cond (umho) 4.37 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____

Temp (oC) 18.16 o (oF) _____ Static Water Level _____ DO (mg/L) 0.33 Turb. (NTU) 510

Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Rachelle H Collins
[Signature]

[Signature]
[Signature]

4-17-24
4-17-24

12:48
1130

Chain of Custody

Scheduled for: 04/17/2024



Client: Big Rivers Electric Corporation Wilson Station

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: Wilson Groundwater Wells 092-00004

Phone: (270) 844-6000

PWS ID#:

State: KY

PO#: _____

Quote# _____

Please Print Legibly

Collected by (Signature): Rachel H Collins
required information

Compliance Monitoring? Yes ___ No ___

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ___ No ___

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY		*required information*		Containers	Sample Description	Composite	Sample Analysis Requested
Workorder #	Date	Collection	Bottle and Preservative				
4042964	(mm/dd/yy):	Time (24 hr):					
Sample ID#							
4042964-11 F	04.17.24	07:30	Plastic 1L pH<2 w/HNO3 Rad 226 (Sub)	1	MW5	g / c	Radium 226 (sub)
			Preservation Check: pH: <u>✓</u>				
4042964-11 G	04.17.24	07:30	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW5	g / c	Radium 228 (sub)
			Preservation Check: pH: <u>✓</u>				
4042964-11 H	04.17.24	07:30	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW5	g / c	Radium 228 (sub)
			Preservation Check: pH: <u>✓</u>				
4042964-11 I	04.17.24	07:30	Plastic 1L pH<2 w/HNO3 (Sub)	1	MW5	g / c	Radium Total (sub)
			Preservation Check: pH: <u>✓</u>				
4042964-11 J	04.17.24	07:30	AG 250mL pH<2 w/H2SO4	1	MW5	g / c	TOC
			Preservation Check: pH: <u>✓</u>				
4042964-12 A	04.17.24	07:30	CG 250mL pH<2 w/HCl Field Blank	1	Mercury Field Blank MW-5	g / c	Mercury Tot 245.7 Field Blank

Preservation Check Performed by: KED

pH Paper Lot #: 228022

Field data collected by: Rachel H Collins Date (mm/dd/yy) 04.17.24 Time (24 hr) 07:30
pH 6.30 Cond (umho) 4.37 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____
Temp (oC) 18.16 or (oF) _____ Static Water Level _____ DO (mg/L) 0.33 Turb. (NTU) 510
Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Rachel H Collins

[Signature]
[Signature]

4-17-24

1248

4-17-24

1137



PACE- Check here if trip charge applied to associated COC

Printed: 4/8/2024 9:35:38AM

Page 99 of 160

Chain of Custody

Scheduled for: 04/17/2024



Client: Big Rivers Electric Corporation Wilson Station

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: Wilson Groundwater Wells 092-00004

Phone: (270) 844-6000
PWS ID#:
State: KY

PO#:
Quote#

Please Print Legibly

Collected by (Signature): Ashley Hall

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date Start time End Date End Time Temp (oC)

Effluent: Start Date Start time End Date End Time Temp (oC)

LAB USE ONLY Workorder # 4042964 Sample ID#	*required information*		Bottle and Preservative	Containers	Sample Description	Composite	Sample Analysis Requested
	Date (mm/dd/yy):	Collection Time (24 hr):					
4042964-13 A	04/16/24	1350	Plastic 1L	1	MW6	g / c	Alkalinity Bicarbonate Alkalinity Carbonate TDS Sulfate 300.0 Alkalinity Total Conductivity (Lab) Chloride 300.0 Fluoride 300.0 Chromium Tot 6020 Arsenic To: 6020 Calcium Tot 6010B Cadmium Tot 6020 Boron Tot 6010B Barium Tot 6020 Lead Tot 6020 Antimony Tot 6020 Beryllium Tot 6020 Cobalt Tot 6020 Copper Tot 6020 Iron Tot 6010B Zinc Tot 6020 Lithium Tct 6020 Magnesium Tot 6010B
4042964-13 B	04/16/24	1350	Plastic 500mL pH<2 w/HNO3	1	MW6	g / c	
4042964-13 C	04/16/24	1350	Plastic 500mL pH<2 w/H2SO4	1	MW6	g / c	COD TOC
4042964-13 D	04/16/24	1350	CG 250mL pH<2 w/HCL	1	MW6	g / c	Mercury Tot 245.7
4042964-13 E	04/16/24	1350	CG 250mL pH<2 w/HCL	1	MW6	g / c	Mercury Tot 245.7

Preservation Check: pH: ☒

Preservation Check: pH: ☐

Preservation Check Performed by: KED

pH Paper Lot #: 228022

Field data collected by: Ashley Hall Date (mm/dd/yy) 04/16/24 Time (24 hr) 1350
pH 6.67 Cond (u/mho) Res Cl (mg/L) Tot Cl (mg/L) Free Cl (mg/L)
Temp (oC) 17.90 or (oF) Static Water Level DO (mg/L) Turb. (NTU)
Flow: ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Ashley Hall
KED

Kim Land
KED

4-17-24
4-19-24

12:48
11:47

1137

KED

Chain of Custody

Scheduled for: **04/17/2024**



Client: **Big Rivers Electric Corporation Wilson Station**

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: **Wilson Groundwater Wells 092-00004**

Phone: (270) 844-6000
PWS ID#:
State: KY

PO#:
Quote#

Please Print Legibly

Collected by (Signature): Amy Hall

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY

required information

Workorder #	Date	Collection	Bottle and Preservative	Containers	Sample Description	Composite	Sample Analysis Requested
4042964	(mm/dd/yy):	Time (24 hr):					
Sample ID#							
4042964-13 F	04/16/24	1350	Plastic 1L pH<2 w/HNO3 Rad 226 (Sub)	1	MW6	g / c	Radium 226 (sub)
			Preservation Check: pH :	☒			
4042964-13 G	04/16/24	1350	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW6	g / c	Radium 228 (sub)
			Preservation Check: pH :	☒			
4042964-13 H	04/16/24	1350	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW6	g / c	Radium 228 (sub)
			Preservation Check: pH :	☒			
4042964-13 I	04/16/24	1350	Plastic 1L pH<2 w/HNO3 (Sub)	1	MW6	g / c	Radium Total (sub)
			Preservation Check: pH :	☒			
4042964-13 J	04/16/24	1350	AG 250mL pH<2 w/H2SO4	1	MW6	g / c	TOC
			Preservation Check: pH :	☒			
4042964-14 A	04/16/24	1350	CG 250mL pH<2 w/HCl Field Blank	1	Mercury Field Blank MW-6	g / c	Mercury Tot 245.7 Field Blank

Preservation Check Performed by: KED

pH Paper Lot #: 228022

Field data collected by: Amy Hall Date (mm/dd/yy) 04/16/24 Time (24 hr) 1350
pH 6.67 Cond (umho) 2.62 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____
Temp (oC) 17.90 o (oF) _____ Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____
Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Amy Hall
[Signature]

[Signature]
[Signature]

4-17-24
4-17-24

1245
1143

1137

Chain of Custody

Scheduled for: 04/17/2024



Client: Big Rivers Electric Corporation Wilson Station

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: Wilson Groundwater Wells 092-00004

Phone: (270) 844-6000
PWS ID#:
State: KY

PO#:
Quote#

Please Print Legibly

Collected by (Signature): Ashley Hall

Compliance Monitoring? Yes ☒ No ☐

Samples Chlorinated? Yes ☐ No ☒

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY		*required information*		Bottle and Preservative	Containers	Sample Description	Composite	Sample Analysis Requested
Workorder #	Date	Collection	Time (24 hr):					
4042964	(mm/dd/yy):	Time (24 hr):						
Sample ID#								
4042964-15 A	04/16/24	1240		Plastic 1L	1	MW7	g / c	Alkalinity Bicarbonate Alkalinity Carbonate TDS Sulfate 300.0 Alkalinity Total Conductivity (Lab) Chloride 300.0 Fluoride 300.0 Chromium Tot 6020 Arsenic Tot 6020 Calcium Tot 6010B Cadm um Tot 6020 Boron Tot 6010B Barium Tot 6020 Lead Tot 6020 Antimony Tot 6020 Beryllium Tot 6020 Cobalt Tot 6020 Copper Tot 6020 Iron Tot 6010B Zinc Tot 6020 Lithium Tot 6020 Magnesium Tot 6010B
4042964-15 B	04/16/24	1240		Plastic 500mL pH<2 w/HNO3	1	MW7	g / c	
				Preservation Check: pH : ☒				
4042964-15 C	04/16/24	1240		Plastic 500mL pH<2 w/H2SO4	1	MW7	g / c	COD TOC
				Preservation Check: pH : ☒				
4042964-15 D	04/16/24	1240		CG 250mL pH<2 w/HCL	1	MW7	g / c	Mercury Tot 245.7
4042964-15 E	04/16/24	1240		CG 250mL pH<2 w/HCL	1	MW7	g / c	Mercury Tot 245.7

Preservation Check Performed by: KEO pH Paper Lot #: 228022

Field data collected by: Ashley Hall	Date (mm/dd/yy): 04/16/24	Time (24 hr): 1240
pH: 6.79	Cond (umho): 2.22	Res Cl (mg/L): _____
Temp (oC): 18.35	or (oF): _____	Tot Cl (mg/L): _____
Flow: _____	Static Water Level: _____	Free Cl (mg/L): _____
☐ MGD	☐ CFS	☐ g/min
☐ GPD	DO (mg/L): _____	Turb. (NTU): _____

Relinquished by: (Signature)	Received by: (Signature)	Date (mm/dd/yy)	Time (24 hr)
Ashley Hall	Tim [Signature]	4-17-24	1248
	Ken [Signature]	4-19-24	1137

Chain of Custody

Scheduled for: **04/17/2024**



Client: **Big Rivers Electric Corporation Wilson Station**

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station

Project: **Wilson Groundwater Wells 092-00004**

Dawn Storckman
PO Box 24
Henderson, KY 42419

Phone: (270) 844-6000

PWS ID#:

State: KY

PO#: _____

Quote# _____

Please Print Legibly

Collected by (Signature): _____
required information

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY

required information

Workorder #

4042964

Sample ID#

Date Collection
(mm/dd/yy): Time (24 hr):

Bottle and Preservative

Containers

Sample Description

Composite

Sample Analysis Requested

4042964-15 F

04/16/24 1246

Plastic 1L pH<2 w/HNO3
Rad 226 (Sub)

1

MW7

g / c

Radium 226 (sub)

Preservation Check: pH: ☒

4042964-15 G

04/16/24 1246

Plastic 1L pH<2 w/HNO3
Rad 228 (Sub)

1

MW7

g / c

Radium 228 (sub)

Preservation Check: pH: ☒

4042964-15 H

04/16/24 1246

Plastic 1L pH<2 w/HNO3
Rad 228 (Sub)

1

MW7

g / c

Radium 228 (sub)

Preservation Check: pH: ☒

4042964-15 I

04/16/24 1246

Plastic 1L pH<2 w/HNO3
(Sub)

1

MW7

g / c

Radium Total (sub)

Preservation Check: pH: ☒

4042964-15 J

04/16/24 1246

AG 250mL pH<2
w/H2SO4

1

MW7

g / c

TOC

Preservation Check: pH: ☒

4042964-16 A

04/16/24 1246

CG 250mL pH<2 w/HCl
Field Blank

1

Mercury Field Blank
MW-7

g / c

Mercury Tot 245.7 Field Blank

Preservation Check Performed by: KED

pH Paper Lot #: 228022

Field data collected by: Asbury Hall

Date (mm/dd/yy) 04/16/24 Time (24 hr) 1246

pH 10.79 Cond (umho) 222 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____

Temp (oC) 18.35 or (oF) _____ Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____

Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Asbury Hall
[Signature]

[Signature]
KED

4-17-24

1248

4-17-24

1137

Chain of Custody

Scheduled for: **04/17/2024**



Client: **Big Rivers Electric Corporation Wilson Station**

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
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Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: **Wilson Groundwater Wells 092-00004**

Phone: (270) 844-6000

PWS ID#:

State: **KY**

PO#:

Quote#

Please Print Legibly

Collected by (Signature): Rachel H Collins

Compliance Monitoring? Yes ☐ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☐

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY		*required information*		Bottle and Preservative	Containers	Sample Description	Composite	Sample Analysis Requested
Workorder #	Date	Collection						
4042964	(mm/dd/yy):	Time (24 hr):						
Sample ID#								
4042964-17 A	<u>04.16.24</u>	<u>12:40</u>		Plastic 1L	1	MW8	g / c	Alkalinity Bicarbonate Alkalinity Carbonate TDS Sulfate 300.0 Alkalinity Total Conductivity (Lab) Chloride 300.0 Fluoride 300.0 Chromium Tot 6020 Arsenic Tot 6020 Calcium Tot 6010B Cadmium Tot 6020 Boron Tot 6010B Barium Tot 6020 Lead Tot 6020 Antimony Tot 6020 Beryllium Tot 6020 Cobalt Tot 6020 Copper Tot 6020 Iron Tot 6010B Zinc Tot 6020 Lithium Tot 6020 Magnesium Tot 6010B
4042964-17 B	<u>04.16.24</u>	<u>12:40</u>		Plastic 500mL pH<2 w/HNO3	1	MW8	g / c	
				Preservation Check: pH : <u>✓</u>				
4042964-17 C	<u>04.16.24</u>	<u>12:40</u>		Plastic 500mL pH<2 w/H2SO4	1	MW8	g / c	COD TOC
				Preservation Check: pH : <u>✓</u>				
4042964-17 D	<u>04.16.24</u>	<u>12:40</u>		CG 250mL pH<2 w/HCL	1	MW8	g / c	Mercury Tot 245.7
4042964-17 E	<u>04.16.24</u>	<u>12:40</u>		CG 250mL pH<2 w/HCL	1	MW8	g / c	Mercury Tot 245.7

Preservation Check Performed by: KCD

pH Paper Lot #: 228022

Field data collected by: Rachel H Collins Date (mm/dd/yy) 04.16.24 Time (24 hr) 12:40

pH 6.30 Cond (umho) 1.54 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____

Temp (oC) 18.62 or (oF) _____ Static Water Level _____ DO (mg/L) 0.09 Turb. (NTU) 31.0

Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Rachel H Collins
Kim Smith

Kim Smith
KCD

4-17-24
4-17-24

12:48
11:37

Chain of Custody

Scheduled for: **04/17/2024**



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PO Box 24
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Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: **Wilson Groundwater Wells 092-00004**

Phone: (270) 844-6000

PWS ID#:

State: KY

PO#: _____

Quote# _____

Please Print Legibly

Collected by (Signature): Rachel H Collins

Compliance Monitoring? Yes ___ No ___

Samples Chlorinated? Yes ___ No ___

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY *required information*

Workorder #	Date	Collection	Bottle and Preservative	Containers	Sample Description	Composite	Sample Analysis Requested
4042964	(mm/dd/yy):	Time (24 hr):					
Sample ID#							
4042964-17 F	04.16.24	12:40	Plastic 1L pH<2 w/HNO3 Rad 226 (Sub)	1	MW8	g / c	Radium 226 (sub)
			Preservation Check: pH :				
4042964-17 G	04.16.24	12:40	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW8	g / c	Radium 228 (sub)
			Preservation Check: pH :				
4042964-17 H	04.16.24	12:40	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW8	g / c	Radium 228 (sub)
			Preservation Check: pH :				
4042964-17 I	04.16.24	12:40	Plastic 1L pH<2 w/HNO3 (Sub)	1	MW8	g / c	Radium Total (sub)
			Preservation Check: pH :				
4042964-17 J	04.16.24	12:40	AG 250mL pH<2 w/H2SO4	1	MW8	g / c	TOC
			Preservation Check: pH :				
4042964-18 A	04.16.24	12:40	CG 250mL pH<2 w/HCl Field Blank	1	Mercury Field Blank MW-8	g / c	Mercury Tot 245.7 Field Blank

Preservation Check Performed by: LCED

pH Paper Lot #: 228022

Field data collected by: Rachel H Collins Date (mm/dd/yy) 04.16.24 Time (24 hr) 12:40
pH 6.30 Cond (umho) ms 1.54 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____
Temp (oC) 18.62 or (oF) _____ Static Water Level _____ DO (mg/L) 0.09 Turb. (NTU) 31.0
Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Rachel H Collins
Tim

Tim
LCED

4-17-24 12:48
4-17-24 11:37



PACE- Check here if trip charge applied to associated COC

Printed: 4/8/2024 9:35:38AM

Page 105 of 160

Chain of Custody

Scheduled for: 04/17/2024



Client: **Big Rivers Electric Corporation Wilson Station**

Report To:
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Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
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Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: **Wilson Groundwater Wells 092-00004**

Phone: (270) 844-6000

PWS ID#:

State: KY

PO#: _____

Quote# _____

Please Print Legibly

Collected by (Signature): Dave Medley

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY		*required information*		Bottle and Preservative	Containers	Sample Description	Composite	Sample Analysis Requested
Workorder #	Date	Collection	Time (24 hr):					
4042964	(mm/dd/yy):							
Sample ID#								
4042964-19 A	<u>04/17/24</u>	<u>0905</u>		Plastic 1L	1	MW10	g / c	Alkalinity Bicarbonate Alkalinity Carbonate TDS Sulfate 300.0 Alkalinity Total Conductivity (Lab) Chloride 300.0 Fluoride 300.0 Chromium Tot 6020 Arsenic Tot 6020 Calcium Tot 6010B Cadmium Tot 6020 Boron Tot 6010B Barium Tot 6020 Lead Tot 6020 Antimony Tot 6020 Beryllium Tot 6020 Cobalt Tot 6020 Copper Tot 6020 Iron Tot 6010B Zinc Tot 6020 Lithium Tot 6020 Magnesium Tot 6010B
4042964-19 B	<u>04/17/24</u>	<u>0905</u>		Plastic 500mL pH<2 w/HNO3	1	MW10	g / c	
				Preservation Check: pH: <u>✓</u>				
4042964-19 C	<u>04/17/24</u>	<u>0905</u>		Plastic 500mL pH<2 w/H2SO4	1	MW10	g / c	COD TOC
				Preservation Check: pH: <u>✓</u>				
4042964-19 D	<u>04/17/24</u>	<u>0905</u>		CG 250mL pH<2 w/HCL	1	MW10	g / c	Mercury Tot 245.7
4042964-19 E	<u>04/17/24</u>	<u>0905</u>		CG 250mL pH<2 w/HCL	1	MW10	g / c	Mercury Tot 245.7

Preservation Check Performed by: 228022 - 160 pH Paper Lot #: _____

Field data collected by: Dave Medley Date (mm/dd/yy) 04/17/24 Time (24 hr) 0905
pH 5.89 Cond (umho) 3.46 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____
Temp (oC) 19.35 or (oF) _____ Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____
Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD.

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Dave Medley
Cari

Cari
K. Dan

4-17-24
4-17-24

12:48
1137

Chain of Custody

Scheduled for: 04/17/2024



Client: **Big Rivers Electric Corporation Wilson Station**

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: **Wilson Groundwater Wells 092-00004**

Phone: (270) 844-6000

PWS ID#:

State: KY

PO#:

Quote#

Please Print Legibly

Collected by (Signature): Dave Medley

required information

Compliance Monitoring? Yes ☒ No ☐

Samples Chlorinated? Yes ☐ No ☒

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY Workorder # 4042964 Sample ID#	*required information*		Bottle and Preservative	Containers	Sample Description	Composite	Sample Analysis Requested
	Date (mm/dd/yy):	Collection Time (24 hr):					
4042964-19 F	<u>04/17/24</u>	<u>0905</u>	Plastic 1L pH<2 w/HNO3 Rad 226 (Sub)	<u>1</u>	MW10	g / c	Radium 226 (sub)
			Preservation Check: pH: <u>✓</u>				
4042964-19 G	<u>04/17/24</u>	<u>0905</u>	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	<u>1</u>	MW10	g / c	Radium 228 (sub)
			Preservation Check: pH: <u>✓</u>				
4042964-19 H	<u>04/17/24</u>	<u>0905</u>	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	<u>1</u>	MW10	g / c	Radium 228 (sub)
			Preservation Check: pH: <u>✓</u>				
4042964-19 I	<u>04/17/24</u>	<u>0905</u>	Plastic 1L pH<2 w/HNO3 (Sub)	<u>1</u>	MW10	g / c	Radium Total (sub)
			Preservation Check: pH: <u>✓</u>				
4042964-19 J	<u>04/17/24</u>	<u>0905</u>	AG 250mL pH<2 w/H2SO4	<u>1</u>	MW10	g / c	TOC
			Preservation Check: pH: <u>✓</u>				
4042964-20 A	<u>04/17/24</u>	<u>0905</u>	CG 250mL pH<2 w/HCl Field Blank	<u>1</u>	Mercury Field Blank MW-10	g / c	Mercury Tot 245.7 Field Blank

Preservation Check Performed by: KED

pH Paper Lot #: 228022

Field data collected by: Dave Medley Date (mm/dd/yy) 04/17/24 Time (24 hr) 0905
pH 5.89 Cond (umho) 3.46 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____
Temp (oC) 19.85 or (oF) _____ Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____
Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Dave Medley
Tina Luch

Tina Luch
K

4-17-24
4-19-24

1248
1137



Chain of Custody

Scheduled for: 04/17/2024



Client: **Big Rivers Electric Corporation Wilson Station**

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station

Project: **Wilson Groundwater Wells 092-00004**

Dawn Storckman
PO Box 24
Henderson, KY 42419

Phone: (270) 844-6000

PWS ID#:

PO#:

State: KY

Quote#

Please Print Legibly

Collected by (Signature): Dave Medley
required information

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY

required information

Workorder #	Date (mm/dd/yy)	Collection Time (24 hr)	Bottle and Preservative	Containers	Sample Description	Composite	Sample Analysis Requested
4042964							
Sample ID#							
4042964-21 A	<u>04/17/24</u>	<u>0745</u>	Plastic 1L	1	MW-10D	g / c	Alkalinity Bicarbonate Alkalinity Carbonate TDS Sulfate 300.0 Alkalinity Total Conductivity (Lab) Chloride 300.0 Fluoride 300.0 Chromium Tot 6020 Arsenic Tot 6020 Calcium Tot 6010B Cadmium Tot 6020 Boron Tot 6010B Barium Tot 6020 Lead Tot 6020 Antimony Tot 6020 Beryllium Tot 6020 Cobalt Tot 6020 Copper Tot 6020 Iron Tot 6010B Zinc Tot 6020 Lithium Tot 6020 Magnesium Tot 6010B
4042964-21 B	<u>04/17/24</u>	<u>0745</u>	Plastic 500mL pH<2 w/HNO3	1	MW-10D	g / c	
Preservation Check: pH: <u> </u>							
4042964-21 C	<u>04/17/24</u>	<u>0745</u>	Plastic 500mL pH<2 w/H2SO4	1	MW-10D	g / c	COD TOC
Preservation Check: pH: <u> </u>							
4042964-21 D	<u>04/17/24</u>	<u>0745</u>	CG 250mL pH<2 w/HCL	1	MW-10D	g / c	Mercury Tot 245.7
4042964-21 E	<u>04/17/24</u>	<u>0745</u>	CG 250mL pH<2 w/HCL	1	MW-10D	g / c	Mercury Tot 245.7

Preservation Check Performed by: KGD

pH Paper Lot #: 228022

Field data collected by: <u>Dave Medley</u>	Date (mm/dd/yy) <u>04/17/24</u>	Time (24 hr) <u>0745</u>
pH <u>6.50</u>	Cond (umho) <u>3.37</u>	Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____
Temp (oC) <u>18.33</u>	or (oF) _____	Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____
Flow: _____	☐ MGD ☐ CFS ☐ g/min ☐ GPD	

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Dave Medley
Kim Head

Tim Head
Kim Head

4-17-24
4-19-24

1248
1137



PACE- Check here if trip charge applied to associated COC

Printed: 4/8/2024 9:35:38AM

Page 108 of 160

Chain of Custody

Scheduled for: 04/17/2024



Client: **Big Rivers Electric Corporation Wilson Station**

Report To:
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Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
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Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: **Wilson Groundwater Wells 092-00004**

Phone: (270) 844-6000

PWS ID#:

State: KY

PO#:

Quote#

Please Print Legibly

Collected by (Signature): Dave Medley
required information

Compliance Monitoring? Yes ☒ No ☐

Samples Chlorinated? Yes ☐ No ☒

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY

required information

Workorder #	Date (mm/dd/yy)	Collection Time (24 hr)	Bottle and Preservative	Containers	Sample Description	Composite	Sample Analysis Requested
4042964							
Sample ID#							
4042964-21 F	<u>04/17/24</u>	<u>0745</u>	Plastic 1L pH<2 w/HNO3 Rad 226 (Sub)	<u>1</u>	MW-10D	g / c	Radium 226 (sub)
			Preservation Check: pH: <u>✓</u>				
4042964-21 G	<u>04/17/24</u>	<u>0745</u>	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	<u>1</u>	MW-10D	g / c	Radium 228 (sub)
			Preservation Check: pH: <u>✓</u>				
4042964-21 H	<u>04/17/24</u>	<u>0745</u>	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	<u>1</u>	MW-10D	g / c	Radium 228 (sub)
			Preservation Check: pH: <u>✓</u>				
4042964-21 I	<u>04/17/24</u>	<u>0745</u>	Plastic 1L pH<2 w/HNO3 (Sub)	<u>1</u>	MW-10D	g / c	Radium Total (sub)
			Preservation Check: pH: <u>✓</u>				
4042964-21 J	<u>04/17/24</u>	<u>0745</u>	AG 250mL pH<2 w/H2SO4	<u>1</u>	MW-10D	g / c	TOC
			Preservation Check: pH: <u>✓</u>				
4042964-22 A	<u>04/17/24</u>	<u>0745</u>	CG 250mL pH<2 w/HCl Field Blank	<u>1</u>	Mercury Field Blank MW-10D	g / c	Mercury Tot 245.7 Field Blank

Preservation Check Performed by: ICED

pH Paper Lot #: 028022

Field data collected by: Dave Medley Date (mm/dd/yy) 04/17/24 Time (24 hr) 0745
pH 6.50 Cond (umho/cm) 3.37 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____
Temp (oC) 18.33 or (oF) _____ Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____
Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Dave Medley
Tim. Searcy

Tim. Searcy
Kim Q.

4-17-24
4-19-24

1248
1130



PACE- Check here if trip charge applied to associated COC

Printed: 4/8/2024 9:35:38AM

Page 109 of 160

Chain of Custody

Scheduled for: 04/17/2024



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Dawn Storckman
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Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: Wilson Groundwater Wells 092-00004

Phone: (270) 844-6000

PWS ID#:

State: KY

PO#:

Quote#

Please Print Legibly

Collected by (Signature): Ashley Hall

Compliance Monitoring? Yes ☒ No ☐

Samples Chlorinated? Yes ☐ No ☒

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Influent: Start Date Start time End Date End Time Temp (oC)

Effluent: Start Date Start time End Date End Time Temp (oC)

LAB USE ONLY

required information

Workorder #

4042964

Sample ID#

Date Collection
(mm/dd/yy): Time (24 hr):

Bottle and Preservative

Containers

Sample Description

Composite

Sample Analysis Requested

4042964-23 A 04/16/24 1050

Plastic 1L

1

MW102

g / c

Alkalinity Bicarbonate Alkalinity
Carbonate TDS Sulfate 300.0
Alkalinity Total Conductivity (Lab)
Chloride 300.0 Fluoride 300.0
Chromium Tot 6020 Arsenic Tot
6020 Calcium Tot 6010B Cadmium
Tot 6020 Boron Tot 6010B Barium
Tot 6020 Lead Tot 6020 Antimony
Tot 6020 Beryllium Tot 6020 Cobalt
Tot 6020 Copper Tot 6020 Iron Tot
6010B Zinc Tot 6020 Lithium Tot
6020 Magnesium Tot 6010B

4042964-23 B 04/16/24 1050

Plastic 500mL pH<2
w/HNO3

1

MW102

g / c

4042964-23 C 04/16/24 1050

Plastic 500mL pH<2
w/H2SO4

1

MW102

g / c

COD TOC

4042964-23 D 04/16/24 1050

CG 250mL pH<2 w/HCL

1

MW102

g / c

Mercury Tot 245.7

4042964-23 E 04/16/24 1050

CG 250mL pH<2 w/HCL

1

MW102

g / c

Mercury Tot 245.7

Preservation Check Performed by: KED

pH Paper Lot #: 228022

Field data collected by: Ashley Hall

Date (mm/dd/yy) 04/16/24 Time (24 hr) 1050

pH 6.94 Cond (umho) 1.05 Res Cl (mg/L) Tot Cl (mg/L) Free Cl (mg/L)

Temp (oC) 16.78 or (oF) Static Water Level DO (mg/L) Turb. (NTU)

Flow: ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Ashley Hall

Tim. [Signature]

4-17-24

1248

Tim. [Signature]

[Signature]

4-17-24

1137

Chain of Custody

Scheduled for: **04/17/2024**



Client: **Big Rivers Electric Corporation Wilson Station**

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Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: **Wilson Groundwater Wells 092-00004**

Phone: (270) 844-6000

PWS ID#:

State: KY

PO#: _____

Quote# _____

Please Print Legibly

Collected by (Signature): Asmery Hall

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY

required information

Workorder #

Date Collection
(mm/dd/yy): Time (24 hr):

4042964

Sample ID#

Bottle and Preservative

Containers

Sample Description

Composite

Sample Analysis Requested

4042964-23 F

04/16/24

1050

Plastic 1L pH<2 w/HNO3
Rad 226 (Sub)

1

MW102

g / c

Radium 226 (sub)

Preservation Check: pH: ✓

4042964-23 G

04/16/24

1050

Plastic 1L pH<2 w/HNO3
Rad 228 (Sub)

1

MW102

g / c

Radium 228 (sub)

Preservation Check: pH: ✓

4042964-23 H

04/16/24

1050

Plastic 1L pH<2 w/HNO3
Rad 228 (Sub)

1

MW102

g / c

Radium 228 (sub)

Preservation Check: pH: ✓

4042964-23 I

04/16/24

1050

Plastic 1L pH<2 w/HNO3
(Sub)

1

MW102

g / c

Radium Total (sub)

Preservation Check: pH: ✓

4042964-23 J

04/16/24

1050

AG 250mL pH<2
w/H2SO4

1

MW102

g / c

TOC

Preservation Check: pH: ✓

4042964-24 A

04/16/24

1050

CG 250mL pH<2 w/HCl
Field Blank

1

Mercury Field Blank
MW-102

g / c

Mercury Tot 245.7 Field Blank

Preservation Check Performed by: _____

pH Paper Lot #: _____

Field data collected by: Asmery Hall

Date (mm/dd/yy) 04/16/24 Time (24 hr) 1050

pH 6.94 Cond (umho) 1.05 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____

Temp (oC) 16.78 or (oF) _____ Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____

Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Asmery Hall
Tim. [Signature]

Tim. [Signature]
[Signature]

4-17-24

12:48

4-19-24

1137



Chain of Custody

Scheduled for: **04/17/2024**



Client: **Big Rivers Electric Corporation Wilson Station**

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: **Wilson Groundwater Wells 092-00004**

Phone: (270) 844-6000
PWS ID#:
State: KY

PO#:
Quote#

Please Print Legibly

Collected by (Signature): Dave Medley
required information

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY

required information

Workorder #

Date (mm/dd/yy):
Collection Time (24 hr):

Bottle and Preservative

Containers

Sample Description

Composite

Sample Analysis Requested

4042964
Sample ID#

4042964-25 A

04/16/24

1435

Plastic 1L

1

MW104

g / c

Alkalinity Bicarbonate Alkalinity
Carbonate TDS Sulfate 300.0
Alkalinity Total Conductivity (Lab)
Chloride 300.0 Fluoride 300.0
Chromium Tot 6020 Arsenic Tot
6020 Calcium Tot 6010B Cadmium
Tot 6020 Boron Tot 6010B Barium
Tot 6020 Lead Tot 6020 Antimony
Tot 6020 Beryllium Tot 6020 Cobalt
Tot 6020 Copper Tot 6020 Iron Tot
6010B Zinc Tot 6020 Lithium Tot
6020 Magnesium Tot 6010B

4042964-25 B

04/16/24

1435

Plastic 500mL pH<2
w/HNO3

1

MW104

g / c

Preservation Check: pH: 1

4042964-25 C

04/16/24

1435

Plastic 500mL pH<2
w/H2SO4

1

MW104

g / c

COD TOC

Preservation Check: pH: 1

4042964-25 D

04/16/24

1435

CG 250mL pH<2 w/HCL

1

MW104

g / c

Mercury Tot 245.7

4042964-25 E

04/16/24

1435

CG 250mL pH<2 w/HCL

1

MW104

g / c

Mercury Tot 245.7

Preservation Check Performed by: SW

pH Paper Lot #: 228022

Field data collected by: Dave Medley

Date (mm/dd/yy) 04/16/24 Time (24 hr) 1435

pH 6.99 Cond (umho) 1.92 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____

Temp (oC) 22.20 or (oF) _____ Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____

Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Dave Medley
SW

SW
Shryver

4-17-24
4/19/24

1248
11:37

Chain of Custody

Scheduled for: **04/17/2024**



Client: **Big Rivers Electric Corporation Wilson Station**

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: **Wilson Groundwater Wells 092-00004**

Phone: (270) 844-6000
PWS ID#:
State: KY

PO#:
Quote#

Please Print Legibly

Collected by (Signature): Dan Medley

Compliance Monitoring? Yes ☒ No ☐

Samples Chlorinated? Yes ☐ No ☒

*For composite samples please indicate begin time, end time and temp (oC) at end time below:

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY		*required information*		Containers	Sample Description	Composite	Sample Analysis Requested
Workorder #	Date	Collection	Bottle and Preservative				
4042964	(mm/dd/yy):	Time (24 hr):					
Sample ID#							
4042964-25 F	<u>04/16/24</u>	<u>1435</u>	Plastic 1L pH<2 w/HNO3 Rad 226 (Sub)	1	MW104	g / c	Radium 226 (sub)
			Preservation Check: pH: <u>/</u>				
4042964-25 G	<u>04/16/24</u>	<u>1435</u>	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW104	g / c	Radium 228 (sub)
			Preservation Check: pH: <u>/</u>				
4042964-25 H	<u>04/16/24</u>	<u>1435</u>	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW104	g / c	Radium 228 (sub)
			Preservation Check: pH: <u>/</u>				
4042964-25 I	<u>04/16/24</u>	<u>1435</u>	Plastic 1L pH<2 w/HNO3 (Sub)	1	MW104	g / c	Radium Total (sub)
			Preservation Check: pH: <u>/</u>				
4042964-25 J	<u>04/16/24</u>	<u>1435</u>	AG 250mL pH<2 w/H2SO4	1	MW104	g / c	TOC
			Preservation Check: pH: <u>Y</u>				
4042964-26 A	<u>04/16/24</u>	<u>1435</u>	CG 250mL pH<2 w/HCl Field Blank	1	Mercury Field Blank MW-104	g / c	Mercury Tot 245.7 Field Blank

Preservation Check Performed by: LSV

pH Paper Lot #: 228000

Field data collected by: Dave Medley Date (mm/dd/yy) 04/16/24 Time (24 hr) 1435
pH 6.99 Cond (umho) 1.92 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____
Temp (oC) 22.20 or (oF) _____ Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____
Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Dan Medley
Tom Shroyer

Tom Shroyer
Shroyer

4-17-24
4/19/24

12:48
11:37



PACE- Check here if trip charge applied to associated COC

Printed: 4/8/2024 9:35:38AM

Page 113 of 160

Chain of Custody

Scheduled for: 04/17/2024



Client: Big Rivers Electric Corporation Wilson Station

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: Wilson Groundwater Wells 092-00004

Phone: (270) 844-6000

PWS ID#:

State: KY

PO#:

Quote#

Please Print Legibly

Collected by (Signature): Dave Madley

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp (oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY

required information

Workorder #	Date (mm/dd/yy)	Collection Time (24 hr)	Bottle and Preservative	Containers	Sample Description	Composite	Sample Analysis Requested
4042964							
Sample ID#							
4042964-27 A	04/16/24	0740	Plastic 1L	1	MW-105R	g / c	Alkalinity Bicarbonate Alkalinity Carbonate TDS Sulfate 300.0 Alkalinity Total Conductivity (Lab) Chloride 300.0 Fluoride 300.0 Chromium Tot 6020 Arsenic Tot 6020 Calcium Tot 6010B Cadmium Tot 6020 Boron Tot 6010B Barium Tot 6020 Lead Tot 6020 Antimony Tot 6020 Beryllium Tot 6020 Cobalt Tot 6020 Copper Tot 6020 Iron Tot 6010B Zinc Tot 6020 Lithium Tot 6020 Magnesium Tot 6010B
4042964-27 B	04/16/24	0740	Plastic 500mL pH<2 w/HNO3	1	MW-105R	g / c	
Preservation Check: pH: <u>1</u>							
4042964-27 C	04/16/24	0740	Plastic 500mL pH<2 w/H2SO4	1	MW-105R	g / c	COD TOC
Preservation Check: pH: <u>1</u>							
4042964-27 D	04/16/24	0740	CG 250mL pH<2 w/HCL	1	MW-105R	g / c	Mercury Tot 245.7
4042964-27 E	04/16/24	0740	CG 250mL pH<2 w/HCL	1	MW-105R	g / c	Mercury Tot 245.7

Preservation Check Performed by: SW

pH Paper Lot #: 228022

Field data collected by: Dave Madley Date (mm/dd/yy) 04/16/24 Time (24 hr) 7:40
pH 6.96 Cond (umho) 1.25 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____
Temp (oC) 16.45 or (oF) _____ Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____
Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Dave Madley
SW

SW
SW

4-17-24
4/19/24

12:48
11:37



PACE- Check here if trip charge applied to associated COC

Printed: 4/8/2024 9:35:38AM

Page 114 of 160

Chain of Custody

Scheduled for: **04/17/2024**



Client: **Big Rivers Electric Corporation Wilson Station**

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: **Wilson Groundwater Wells 092-00004**

Phone: (270) 844-6000

PWS ID#:

State: KY

PO#: _____

Quote# _____

Please Print Legibly

Collected by (Signature): Dave Medley
required information

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp (oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY

required information

Workorder #

4042964

Sample ID#

Date Collection
(mm/dd/yy): Time (24 hr):

Bottle and Preservative

Containers

Sample Description

Composite

Sample Analysis Requested

4042964-27 F

04/16/24

0740

Plastic 1L pH<2 w/HNO3
Rad 226 (Sub)

1

MW-105R

g / c

Radium 226 (sub)

Preservation Check: pH: /

4042964-27 G

04/16/24

0740

Plastic 1L pH<2 w/HNO3
Rad 228 (Sub)

1

MW-105R

g / c

Radium 228 (sub)

Preservation Check: pH: /

4042964-27 H

04/16/24

0740

Plastic 1L pH<2 w/HNO3
Rad 228 (Sub)

1

MW-105R

g / c

Radium 228 (sub)

Preservation Check: pH: /

4042964-27 I

04/16/24

0740

Plastic 1L pH<2 w/HNO3
(Sub)

1

MW-105R

g / c

Radium Total (sub)

Preservation Check: pH: f

4042964-27 J

04/16/24

0740

AG 250mL pH<2
w/H2SO4

1

MW-105R

g / c

TOC

Preservation Check: pH: /

4042964-28 A

04/16/24

0740

CG 250mL pH<2 w/HCl
Field Blank

1

Mercury Field Blank
MW-105R

g / c

Mercury Tot 245.7 Field Blank

Preservation Check Performed by: Sam

pH Paper Lot #: 228022

Field data collected by:

Dave Medley

Date (mm/dd/yy) 04/16/24 Time (24 hr) 0740

pH

6.96

Cond (umho)

1.25

Res Cl (mg/L)

Tot Cl (mg/L)

Free Cl (mg/L)

Temp (oC)

16.45

or

(oF)

Static Water Level

DO (mg/L)

Turb. (NTU)

Flow:

☐ MGD

☐ CFS

☐ g/min

☐ GPD

Relinquished by: (Signature)

Dave Medley

Received by: (Signature)

Tim Hand

Date (mm/dd/yy)

4-17-24

Time (24 hr)

1248

4/19/24

11:37



PACE- Check here if trip charge applied to associated COC

Printed: 4/8/2024 9:35:38AM

Page 115 of 160

Chain of Custody

Scheduled for: 04/17/2024



Client: Big Rivers Electric Corporation Wilson Station

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: Wilson Groundwater Wells 092-00004

Phone: (270) 844-6000

PWS ID#:

State: KY

PO#:

Quote#

Please Print Legibly

Collected by (Signature): Rachel H Collins
required information

Compliance Monitoring? Yes ☐ No ☐

*For composite samples please indicate begin time, end time and temp (oC) at end time below:

Samples Chlorinated? Yes ☐ No ☐

Influent: Start Date Start time End Date End Time Temp (oC)

Effluent: Start Date Start time End Date End Time Temp (oC)

LAB USE ONLY *required information*
Workorder # 4042964
Sample ID#
Date (mm/dd/yy): 04-16-24
Collection Time (24 hr): 07:20

Bottle and Preservative	Containers	Sample Description	Composite	Sample Analysis Requested
Plastic 1L	1	MW110	g / c	Alkalinity Bicarbonate Alkalinity Carbonate TDS Sulfate 300.0 Alkalinity Total Conductivity (Lab) Chloride 300.0 Fluoride 300.0 Chromium Tot 6020 Arsenic Tct 6020 Calcium Tot 6010B Cadmium Tot 6020 Boron Tot 6010B Barium Tot 6020 Lead Tot 6020 Antimony Tot 6020 Beryllium Tot 6020 Cobalt Tot 6020 Copper Tot 6020 Iron Tot 6010B Zinc Tot 6020 Lithium Tot 6020 Magnesium Tot 6010B
Plastic 500mL pH<2 w/HNO3	1	MW110	g / c	

Preservation Check: pH: 1

4042964-29 C 04-16-24 07:20

Plastic 500mL pH<2 w/H2SO4

1

MW110

g / c

COD TOC

Preservation Check: pH: 1

4042964-29 D 04-16-24 07:20

CG 250mL pH<2 w/HCL

1

MW110

g / c

Mercury Tot 245.7

4042964-29 E 04-16-24 07:20

CG 250mL pH<2 w/HCL

1

MW110

g / c

Mercury Tot 245.7

Preservation Check Performed by: SN

pH Paper Lot #: 228022

Field data collected by: Rachel H Collins Date (mm/dd/yy) 04-16-24 Time (24 hr) 07:20

pH 6.39 Cond (uS/cm) 527 Res Cl (mg/L) Tot Cl (mg/L) Free Cl (mg/L)

Temp (oC) 15.86 or (oF) Static Water Level DO (mg/L) 0.45 Turb. (NTU) 23.3

Flow: ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Rachel H Collins
Tim

Tim
Shay

4-17-24
4/19/24

12:48
11:37

Chain of Custody

Scheduled for: **04/17/2024**



Client: **Big Rivers Electric Corporation Wilson Station**

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station

Project: **Wilson Groundwater Wells 092-00004**

Dawn Storckman
PO Box 24
Henderson, KY 42419

Phone: (270) 844-6000

PWS ID#:

PO#:

State: KY

Quote#

Please Print Legibly

Collected by (Signature): Rachel H Collins
required information

Compliance Monitoring? Yes ☐ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☐

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY

required information

Workorder #	Date	Collection	Bottle and Preservative	Containers	Sample Description	Composite	Sample Analysis Requested
4042964	(mm/dd/yy)	Time (24 hr)					
Sample ID#							
4042964-29 F	<u>04-16-24</u>	<u>07:20</u>	Plastic 1L pH<2 w/HNO3 Rad 226 (Sub)	1	MW110	g / c	Radium 226 (sub)
			Preservation Check: pH: <u>/</u>				
4042964-29 G	<u>04-16-24</u>	<u>07:20</u>	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW110	g / c	Radium 228 (sub)
			Preservation Check: pH: <u>/</u>				
4042964-29 H	<u>04-16-24</u>	<u>07:20</u>	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW110	g / c	Radium 228 (sub)
			Preservation Check: pH: <u>/</u>				
4042964-29 I	<u>04-16-24</u>	<u>07:20</u>	Plastic 1L pH<2 w/HNO3 (Sub)	1	MW110	g / c	Radium Total (sub)
			Preservation Check: pH: <u>/</u>				
4042964-29 J	<u>04-16-24</u>	<u>07:20</u>	AG 250mL pH<2 w/H2SO4	1	MW110	g / c	TOC
			Preservation Check: pH: <u>/</u>				
4042964-30 A	<u>04-16-24</u>	<u>07:20</u>	CG 250mL pH<2 w/HCl Field Blank	1	Mercury Field Blank MW-110	g / c	Mercury Tot 245.7 Field Blank

Preservation Check Performed by: SN

pH Paper Lot #: 228022

Field data collected by: Rachel H Collins Date (mm/dd/yy) 04-16-24 Time (24 hr) 07:20
pH 6.39 Cond (umho) MS .527 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____
Temp (oC) 15.86 or (oF) _____ Static Water Level _____ DO (mg/L) 0.45 Turb. (NTU) 23.3
Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Rachel H Collins
Tim

Tim
Shang

4-17-24
4/19/24

12:48
11:37



PACE- Check here if trip charge applied to associated COC

Printed: 4/8/2024 9:35:38AM

Page 117 of 160

Chain of Custody

Scheduled for: **04/17/2024**



Client: **Big Rivers Electric Corporation Wilson Station**

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: **Wilson Groundwater Wells 092-00004**

Phone: (270) 844-6000

PWS ID#:

State: KY

PO#:

Quote#

Please Print Legibly

Collected by (Signature): Rachel H Collins

Compliance Monitoring? Yes ☐ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☐

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY

required information

Workorder #

Date

Collection

4042964

(mm/dd/yy):

Time (24 hr):

Bottle and Preservative

Containers

Sample Description

Composite

Sample Analysis Requested

Sample ID#

4042964-31 A

04-16-24

09:25

Plastic 1L

1

MW-111

g / c

Alkalinity Bicarbonate Alkalinity
Carbonate TDS Sulfate 300.0
Alkalinity Total Conductivity (Lab)
Chloride 300.0 Fluoride 300.0
Chromium Tot 6020 Arsenic Tot
6020 Calcium Tot 6010B Cadmium
Tot 6020 Boron Tot 6010B Barium
Tot 6020 Lead Tot 6020 Antimony
Tot 6020 Beryllium Tot 6020 Cobalt
Tot 6020 Copper Tot 6020 Iron Tot
6010B Zinc Tot 6020 Lithium Tot
6020 Magnesium Tot 6010B

4042964-31 B

04-16-24

09:25

Plastic 500mL pH<2
w/HNO3

1

MW-111

g / c

Preservation Check: pH: ✓

4042964-31 C

04-16-24

09:25

Plastic 500mL pH<2
w/H2SO4

1

MW-111

g / c

COD TOC

Preservation Check: pH: ✓

4042964-31 D

04-16-24

09:25

CG 250mL pH<2 w/HCL

1

MW-111

g / c

Mercury Tot 245.7

4042964-31 E

04-16-24

09:25

CG 250mL pH<2 w/HCL

1

MW-111

g / c

Mercury Tot 245.7

Preservation Check Performed by: SN

pH Paper Lot #: 228022

Field data collected by: Rachel H Collins

Date (mm/dd/yy) 04-16-24 Time (24 hr) 09:25

pH 6.17 Cond (uMm) 3.18 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____

Temp (oC) 16.74 or (oF) _____ Static Water Level _____ DO (mg/L) 0.27 Turb. (NTU) 0.0

Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Rachel H Collins
SN

Tim Head
Shirley

4-17-24
4/19/24

12:48
11:37



PACE- Check here if trip charge applied to associated COC

Printed: 4/8/2024 9:35:38AM

Page 118 of 160

Chain of Custody

Scheduled for: **04/17/2024**



Client: **Big Rivers Electric Corporation Wilson Station**

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: **Wilson Groundwater Wells 092-00004**

Phone: (270) 844-6000

PWS ID#:

State: KY

PO#:

Quote#

Please Print Legibly

Collected by (Signature): Rachel H Collins
required information

Compliance Monitoring? Yes ☐ No ☐

*For composite samples please indicate begin time, end time and temp (oC) at end time below:

Samples Chlorinated? Yes ☐ No ☐

Influent: Start Date Start time End Date End Time Temp (oC)

Effluent: Start Date Start time End Date End Time Temp (oC)

LAB USE ONLY		*required information*		Containers	Sample Description	Composite	Sample Analysis Requested
Workorder #	Date	Collection	Bottle and Preservative				
4042964	(mm/dd/yy):	Time (24 hr):					
Sample ID#							
4042964-31 F	<u>04-16-24</u>	<u>09:25</u>	Plastic 1L pH<2 w/HNO3 Rad 226 (Sub)	1	MW-111	g / c	Radium 226 (sub)
			Preservation Check: pH: <u>✓</u>				
4042964-31 G	<u>04-16-24</u>	<u>09:25</u>	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW-111	g / c	Radium 228 (sub)
			Preservation Check: pH: <u>✓</u>				
4042964-31 H	<u>04-16-24</u>	<u>09:25</u>	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW-111	g / c	Radium 228 (sub)
			Preservation Check: pH: <u>✓</u>				
4042964-31 I	<u>04-16-24</u>	<u>09:25</u>	Plastic 1L pH<2 w/HNO3 (Sub)	1	MW-111	g / c	Radium Total (sub)
			Preservation Check: pH: <u>✓</u>				
4042964-31 J	<u>04-16-24</u>	<u>09:25</u>	AG 250mL pH<2 w/H2SO4	1	MW-111	g / c	TOC
			Preservation Check: pH: <u>✓</u>				
4042964-32 A	<u>04-16-24</u>	<u>09:25</u>	CG 250mL pH<2 w/HCl Field Blank	1	Mercury Field Blank MW-111	g / c	Mercury Tot 245.7 Field Blank

Preservation Check Performed by: Sm

pH Paper Lot #: 228022

Field data collected by: Rachel H Collins Date (mm/dd/yy) 04-16-24 Time (24 hr) 09:25
pH 6.17 Cond (uMm) 3.18 Res Cl (mg/L) Tot Cl (mg/L) Free Cl (mg/L)
Temp (oC) 16.74 or (oF) Static Water Level DO (mg/L) 0.27 Turb. (NTU) 0.0
Flow: ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Rachel H Collins
Sm

Sm
Sm

4-17-24
4/19/24

12:48
11:37



PACE- Check here if trip charge applied to associated COC

Printed: 4/8/2024 9:35:38AM

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Chain of Custody

Scheduled for: **04/17/2024**



Client: **Big Rivers Electric Corporation Wilson Station**

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: **Wilson Groundwater Wells 092-00004**

Phone: (270) 844-6000
PWS ID#:
State: KY

PO#:
Quote#

Please Print Legibly

Collected by (Signature): Ashley Hall *required information*

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp (oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY

required information

Workorder #

Date (mm/dd/yy):
Collection Time (24 hr):

Bottle and Preservative

Containers

Sample Description

Composite

Sample Analysis Requested

4042964
Sample ID#

4042964-33 A

04/16/24 0915

Plastic 1L

1

MW-112

g / c

Alkalinity Bicarbonate Alkalinity
Carbonate TDS Sulfate 300.0
Alkalinity Total Conductivity (Lab)
Chloride 300.0 Fluoride 300.0
Chromium Tot 6020 Arsenic Tot
6020 Calcium Tot 6010B Cadmium
Tot 6020 Boron Tot 6010B Barium
Tot 6020 Lead Tot 6020 Antimony
Tot 6020 Beryllium Tot 6020 Cobalt
Tot 6020 Copper Tot 6020 Iron Tot
6010B Zinc Tot 6020 Lithium Tot
6020 Magnesium Tot 6010B

4042964-33 B

04/16/24 0915

Plastic 500mL pH<2
w/HNO3

1

MW-112

g / c

4042964-33 C

04/16/24 0915

Plastic 500mL pH<2
w/H2SO4

1

MW-112

g / c

COD TOC

4042964-33 D

04/16/24 0915

CG 250mL pH<2 w/HCL

1

MW-112

g / c

Mercury Tot 245.7

4042964-33 E

04/16/24 0915

CG 250mL pH<2 w/HCL

1

MW-112

g / c

Mercury Tot 245.7

Preservation Check Performed by: SN

pH Paper Lot #: 228022

Field data collected by: Ashley Hall

Date (mm/dd/yy) 04/16/24

Time (24 hr) 0915

pH 6.88

Cond (umho) MS 1.18

Res Cl (mg/L)

Tot Cl (mg/L)

Free Cl (mg/L)

Temp (oC) 15.02

or

(oF)

Static Water Level

DO (mg/L)

Turb. (NTU)

Flow: _____

☐ MGD

☐ CFS

☐ g/min

☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Ashley Hall

Tim. Sand
Shung

4-17-24

1248

4/19/24

11:37



PACE- Check here if trip charge applied to associated COC

Printed: 4/8/2024 9:35:38AM

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Chain of Custody

Scheduled for: 04/17/2024



Client: Big Rivers Electric Corporation Wilson Station

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: Wilson Groundwater Wells 092-00004

Phone: (270) 844-6000

PWS ID#:

State: KY

PO#:

Quote#

Please Print Legibly

Collected by (Signature): Ashley Hall

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp (oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date Start time End Date End Time Temp (oC)

Effluent: Start Date Start time End Date End Time Temp (oC)

LAB USE ONLY

required information

Workorder #

Date Collection

4042964

(mm/dd/yy): Time (24 hr):

Bottle and Preservative

Containers

Sample Description

Composite

Sample Analysis Requested

Sample ID#

4042964-33 F

04/16/24

0915

Plastic 1L pH<2 w/HNO3
Rad 226 (Sub)

1

MW-112

g / c

Radium 226 (sub)

Preservation Check: pH :

1

4042964-33 G

04/16/24

0915

Plastic 1L pH<2 w/HNO3
Rad 228 (Sub)

1

MW-112

g / c

Radium 228 (sub)

Preservation Check: pH :

1

4042964-33 H

04/16/24

0915

Plastic 1L pH<2 w/HNO3
Rad 228 (Sub)

1

MW-112

g / c

Radium 228 (sub)

Preservation Check: pH :

1

4042964-33 I

04/16/24

0915

Plastic 1L pH<2 w/HNO3
(Sub)

1

MW-112

g / c

Radium Total (sub)

Preservation Check: pH :

1

4042964-33 J

04/16/24

0915

AG 250mL pH<2
w/H2SO4

1

MW-112

g / c

TOC

Preservation Check: pH :

1

4042964-34 A

04/16/24

0915

CG 250mL pH<2 w/HCl
Field Blank

1

Mercury Field Blank
MW-112

g / c

Mercury Tot 245.7 Field Blank

Preservation Check Performed by:

SW

pH Paper Lot #:

228022

Field data collected by:

Ashley Hall

Date (mm/dd/yy)

04/16/24

Time (24 hr)

0915

pH

6.88

Cond (umho)

1.18

Res Cl (mg/L)

Tot Cl (mg/L)

Free Cl (mg/L)

Temp (oC)

15.02

or

(oF)

Static Water Level

DO (mg/L)

Turb. (NTU)

Flow:

☐ MGD

☐ CFS

☐ g/min

☐ GPD

Relinquished by: (Signature)

Ashley Hall

Received by: (Signature)

Tommy Spence

Date (mm/dd/yy)

4-17-24
4/19/24

Time (24, hr)

1248
11:37



PACE- Check here if trip charge applied to associated COC

Printed: 4/8/2024 9:35:38AM

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Chain of Custody

Scheduled for: **04/17/2024**



Client: Big Rivers Electric Corporation Wilson Station

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: Wilson Groundwater Wells 092-00004

Phone: (270) 844-6000

PWS ID#:

State: KY

PO#:

Quote#

Please Print Legibly

Collected by (Signature): Dave Medley

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY

required information

Workorder #

Date Collection
(mm/dd/yy): Time (24 hr):

Bottle and Preservative

Containers

Sample Description

Composite

Sample Analysis Requested

4042964
Sample ID#

4042964-35 A

04/16/24

0950

Plastic 1L

1

MW-113

g / c

Alkalinity Bicarbonate Alkalinity
Carbonate TDS Sulfate 300.0
Alkalinity Total Conductivity (Lab)
Chloride 300.0 Fluoride 300.0
Chromium Tot 6020 Arsenic Tot
6020 Calcium Tot 6010B Cadmium
Tot 6020 Boron Tot 6010B Barium
Tot 6020 Lead Tot 6020 Antimony
Tot 6020 Beryllium Tot 6020 Cobalt
Tot 6020 Copper Tot 6020 Iron Tot
6010B Zinc Tot 6020 Lithium Tot
6020 Magnesium Tot 6010B

4042964-35 B

04/16/24

0950

Plastic 500mL pH<2
w/HNO3

1

MW-113

g / c

4042964-35 C

04/16/24

0950

Plastic 500mL pH<2
w/H2SO4

1

MW-113

g / c

COD TOC

4042964-35 D

04/16/24

0950

CG 250mL pH<2 w/HCL

1

MW-113

g / c

Mercury Tot 245.7

4042964-35 E

04/16/24

0950

CG 250mL pH<2 w/HCL

1

MW-113

g / c

Mercury Tot 245.7

Preservation Check Performed by: SN

pH Paper Lot #: 128022

Field data collected by: Dave Medley

Date (mm/dd/yy) 04/16/24 Time (24 hr) 0950

pH 6.67 Cond (umho) 1.95 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____

Temp (oC) 18.18 or (oF) _____ Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____

Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Dave Medley
Tim Leland

Tim Leland
Shirley

4-17-24
4/19/24

12:48
11:37



PACE- Check here if trip charge applied to associated COC

Printed: 4/8/2024 9:35:38AM

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Chain of Custody

Scheduled for: **04/17/2024**



Client: **Big Rivers Electric Corporation Wilson Station**

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: **Wilson Groundwater Wells 092-00004**

Phone: (270) 844-6000

PWS ID#:

State: KY

PO#: _____

Quote# _____

Please Print Legibly

Collected by (Signature): Dave Medley

Compliance Monitoring? Yes ☒ No ☐

required information

Samples Chlorinated? Yes ☐ No ☒

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY Workorder # 4042964 Sample ID#	*required information*		Bottle and Preservative	Containers	Sample Description	Composite	Sample Analysis Requested
	Date (mm/dd/yy):	Collection Time (24 hr):					
4042964-35 F	04/16/24	0950	Plastic 1L pH<2 w/HNO3 Rad 226 (Sub)	1	MW-113	g / c	Radium 226 (sub)
			Preservation Check: pH: <u>/</u>				
4042964-35 G	04/16/24	0950	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW-113	g / c	Radium 228 (sub)
			Preservation Check: pH: <u>/</u>				
4042964-35 H	04/16/24	0950	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW-113	g / c	Radium 228 (sub)
			Preservation Check: pH: <u>/</u>				
4042964-35 I	04/16/24	0950	Plastic 1L pH<2 w/HNO3 (Sub)	1	MW-113	g / c	Radium Total (sub)
			Preservation Check: pH: <u>/</u>				
4042964-35 J	04/16/24	0950	AG 250mL pH<2 w/H2SO4	1	MW-113	g / c	TOC
			Preservation Check: pH: <u>/</u>				
4042964-36 A	04/16/24	0950	CG 250mL pH<2 w/HCl Field Blank	1	Mercury Field Blank MW-113	g / c	Mercury Tot 245.7 Field Blank

Preservation Check Performed by: EW

pH Paper Lot #: 28022

Field data collected by: Dave Medley Date (mm/dd/yy) _____ Time (24 hr) _____
pH 6.67 Cond (umho) 1.99 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____
Temp (oC) 18.18 or (oF) _____ Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____
Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Dave Medley
Tom Linder

Tom Linder
Shirley

4-17-24
4/19/24

12:48
11:37

Chain of Custody

Scheduled for: **04/17/2024**



Client: **Big Rivers Electric Corporation Wilson Station**

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: **Wilson Groundwater Wells 092-00004**

Phone: (270) 844-6000

PWS ID#:

State: KY

PO#:

Quote#

Please Print Legibly

Collected by (Signature): Dave Medley
required information

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date Start time End Date End Time Temp (oC)

Effluent: Start Date Start time End Date End Time Temp (oC)

LAB USE ONLY

required information

Workorder #

Date Collection

4042964

(mm/dd/yy): Time (24 hr):

Bottle and Preservative

Containers

Sample Description

Composite

Sample Analysis Requested

Sample ID#

4042964-37 A

04/16/24

0740

1245 PM

Plastic 1L

1

MW-114

g / c

Alkalinity Bicarbonate Alkalinity
Carbonate TDS Sulfate 300.0
Alkalinity Total Conductivity (Lab)
Chloride 300.0 Fluoride 300.0
Chromium Tot 6020 Arsenic Tot
6020 Calcium Tot 6010B Cadmium
Tot 6020 Boron Tot 6010B Barium
Tot 6020 Lead Tot 6020 Antimony
Tot 6020 Beryllium Tot 6020 Cobalt
Tot 6020 Copper Tot 6020 Iron Tot
6010B Zinc Tot 6020 Lithium Tot
6020 Magnesium Tot 6010B

4042964-37 B

04/16/24

0740

1245 PM

Plastic 500mL pH<2
w/HNO3

1

MW-114

g / c

4042964-37 C

04/16/24

0740

1245 PM

Plastic 500mL pH<2
w/H2SO4

1

MW-114

g / c

COD TOC

4042964-37 D

04/16/24

0740

1245 PM

Preservation Check: pH:

CG 250mL pH<2 w/HCL

1

MW-114

g / c

Mercury Tot 245.7

4042964-37 E

04/16/24

0740

1245 PM

CG 250mL pH<2 w/HCL

1

MW-114

g / c

Mercury Tot 245.7

Preservation Check Performed by: SN

pH Paper Lot #: 228022

Field data collected by: Dave Medley

Date (mm/dd/yy) 04/16/24 Time (24 hr) 1245

pH 7.25 Cond (umho) 0.91 Res Cl (mg/L) Tot Cl (mg/L) Free Cl (mg/L)

Temp (oC) 20.42 or (oF) Static Water Level DO (mg/L) Turb. (NTU)

Flow: ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Dave Medley
Tom Shand

Tom Shand
Shangyan

4-17-24
4/19/24

1248
11:37



PACE- Check here if trip charge applied to associated COC

Printed: 4/8/2024 9:35:38AM

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Chain of Custody

Scheduled for: 04/17/2024



Client: **Big Rivers Electric Corporation Wilson Station**

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: **Wilson Groundwater Wells 092-00004**

Phone: (270) 844-6000

PWS ID#:

State: KY

PO#: _____

Quote# _____

Please Print Legibly

Collected by (Signature): Dave Medley

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY

required information

Workorder #

4042964

Sample ID#

Date Collection
(mm/dd/yy): Time (24 hr):

Bottle and Preservative

Containers

Sample Description

Composite

Sample Analysis Requested

4042964-37 F	<u>04/16/24</u>	<u>1245</u>	Plastic 1L pH<2 w/HNO3 Rad 226 (Sub)	1	MW-114	g / c	Radium 226 (sub)
			Preservation Check: pH: <u>/</u>				
4042964-37 G	<u>04/16/24</u>	<u>1245</u>	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW-114	g / c	Radium 228 (sub)
			Preservation Check: pH: <u>/</u>				
4042964-37 H	<u>04/16/24</u>	<u>1245</u>	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW-114	g / c	Radium 228 (sub)
			Preservation Check: pH: <u>/</u>				
4042964-37 I	<u>04/16/24</u>	<u>1245</u>	Plastic 1L pH<2 w/HNO3 (Sub)	1	MW-114	g / c	Radium Total (sub)
			Preservation Check: pH: <u>/</u>				
4042964-37 J	<u>04/16/24</u>	<u>1245</u>	AG 250mL pH<2 w/H2SO4	1	MW-114	g / c	TOC
			Preservation Check: pH: <u>/</u>				
4042964-38 A	<u>04/16/24</u>	<u>1245</u>	CG 250mL pH<2 w/HCl Field Blank	1	Mercury Field Blank MW-114	g / c	Mercury Tot 245.7 Field Blank

Preservation Check Performed by: 9WV

pH Paper Lot #: 228022

Field data collected by: Dave Medley Date (mm/dd/yy) 04/16/24 Time (24 hr) 1245

pH 7.25 Cond (umho) 0.91 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____

Temp (oC) 20.42 or (oF) _____ Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____

Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Dave Medley
Tom Sand

Tom Sand
[Signature]

4-17-24
4/19/24

1248
11:37

Chain of Custody

Scheduled for: 04/17/2024



Client: Big Rivers Electric Corporation Wilson Station

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: Wilson Groundwater Wells 092-00004

Phone: (270) 844-6000

PWS ID#:

State: KY

PO#:

Quote#

Please Print Legibly

Collected by (Signature): Rachael H Collins

Compliance Monitoring? Yes ☐ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☐

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY

required information

Workorder #

Date

Collection

4042964

(mm/dd/yy):

Time (24 hr):

Bottle and Preservative

Containers

Sample Description

Composite

Sample Analysis Requested

Sample ID#

4042964-39 A

04.17.24

11:33

Plastic 1L

1

Well Duplicate 1

g / c

Alkalinity Bicarbonate Alkalinity
Carbonate TDS Sulfate 300.0
Alkalinity Total Conductivity (Lab)
Chloride 300.0 Fluoride 300.0
Chromium Tot 6020 Arsenic To:
6020 Calcium Tot 6010B Cadmium
Tot 6020 Boron Tot 6010B Barium
Tot 6020 Lead Tot 6020 Antimony
Tot 6020 Beryllium Tot 6020 Cobalt
Tot 6020 Copper Tot 6020 Iron Tot
6010B Zinc Tot 6020 Lithium Tot
6020 Magnesium Tot 6010B

4042964-39 B

04.17.24

11:33

Plastic 500mL pH<2
w/HNO3

1

Well Duplicate 1

g / c

Preservation Check: pH: 1

4042964-39 C

04.17.24

11:33

Plastic 500mL pH<2
w/H2SO4

1

Well Duplicate 1

g / c

COD TOC

Preservation Check: pH: 1

4042964-39 D

04.17.24

11:33

CG 250mL pH<2 w/HCL

1

Well Duplicate 1

g / c

Mercury Tot 245.7

4042964-39 E

04.17.24

11:33

CG 250mL pH<2 w/HCL

1

Well Duplicate 1

g / c

Mercury Tot 245.7

Preservation Check Performed by: GN

pH Paper Lot #: 228022

Field data collected by: Rachael H Collins

Date (mm/dd/yy) 04.17.24 Time (24 hr) 11:33

pH 6.65 Cond (umho) _____ Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____

Temp (oC) 21.37 or (oF) _____ Static Water Level _____ DO (mg/L) 0.83 Turb. (NTU) 9.7

Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Rachael H Collins
[Signature]

[Signature]
[Signature]

4-17-24
4/19/24

12:48
11:37



PACE- Check here if trip charge applied to associated COC

Printed: 4/8/2024 9:35:38AM

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Chain of Custody

Scheduled for: 04/17/2024



Client: **Big Rivers Electric Corporation Wilson Station**

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station

Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: **Wilson Groundwater Wells 092-00004**

Phone: (270) 844-6000

PWS ID#:

State: KY

PO#:

Quote#

Please Print Legibly

Collected by (Signature): Rachel H Collins

Compliance Monitoring? Yes ☐ No ☐

*For composite samples please indicate begin time, end time and temp (oC) at end time below:

Samples Chlorinated? Yes ☐ No ☐

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY *required information*

Workorder #	Date (mm/dd/yy)	Collection Time (24 hr)	Bottle and Preservative	Containers	Sample Description	Composite	Sample Analysis Requested
4042964							
Sample ID#							
4042964-39 F	04.17.24	11:33	Plastic 1L pH<2 w/HNO3 Rad 226 (Sub)	1	Well Duplicate 1	g / c	Radium 226 (sub)
			Preservation Check: pH :	1			
4042964-39 G	04.17.24	11:33	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	Well Duplicate 1	g / c	Radium 228 (sub)
			Preservation Check: pH :	1			
4042964-39 H	04.17.24	11:33	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	Well Duplicate 1	g / c	Radium 228 (sub)
			Preservation Check: pH :	1			
4042964-39 I	04.17.24	11:33	Plastic 1L pH<2 w/HNO3 (Sub)	1	Well Duplicate 1	g / c	Radium Total (sub)
			Preservation Check: pH :	1			
4042964-39 J	04.17.24	11:33	AG 250mL pH<2 w/H2SO4	1	Well Duplicate 1	g / c	TOC
			Preservation Check: pH :	1			
4042964-40 A	04.17.24	11:33	CG 250mL pH<2 w/HCl Field Blank	1	Mercury Field Blank Well Dup-1	g / c	Mercury Tot 245.7 Field Blank

Preservation Check Performed by: SN

pH Paper Lot #: 228022

Field data collected by: Rachel H Collins Date (mm/dd/yy) _____ Time (24 hr) _____
pH 6.65 Cond (uMm) 1.81 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____
Temp (oC) 21.37 or (oF) _____ Static Water Level _____ DO (mg/L) 0.85 Turb. (NTU) 9.7
Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Rachel H Collins
[Signature]

[Signature]
[Signature]

4-17-24
4/19/24

12:48
11:37



PACE- Check here if trip charge applied to associated COC

Printed: 4/8/2024 9:35:38AM

Page 127 of 160

Chain of Custody

Scheduled for: 04/17/2024



Client: **Big Rivers Electric Corporation Wilson Station**

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: **Wilson Groundwater Wells 092-00004**

Phone: (270) 844-6000

PWS ID#:

State: KY

PO#:

Quote#

Please Print Legibly

Collected by (Signature): Rachel H Collins
required information

Compliance Monitoring? Yes ☐ No ☐

*For composite samples please indicate begin time, end time and temp (oC) at end time below:

Samples Chlorinated? Yes ☐ No ☐

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY

required information

Workorder #

Date (mm/dd/yy):
Collection Time (24 hr):

Bottle and Preservative

Containers

Sample Description

Composite

Sample Analysis Requested

4042964
Sample ID#

4042964-41 A 04.16.24 07:42

Plastic 1L

1

Well Duplicate 2

g / c

Alkalinity Bicarbonate Alkalinity
Carbonate TDS Sulfate 300.0
Alkalinity Total Conductivity (Lab)
Chloride 300.0 Fluoride 300.0
Chromium Tot 6020 Arsenic To:
6020 Calcium Tot 6010B Cadmium
Tot 6020 Boron Tot 6010B Barium
Tot 6020 Lead Tot 6020 Antimony
Tot 6020 Beryllium Tot 6020 Cobalt
Tot 6020 Copper Tot 6020 Iron Tot
6010B Zinc Tot 6020 Lithium Tct
6020 Magnesium Tot 6010B

4042964-41 B 04.16.24 07:42

Plastic 500mL pH<2
w/HNO3

1

Well Duplicate 2

g / c

Preservation Check: pH: 1

4042964-41 C 04.16.24 07:42

Plastic 500mL pH<2
w/H2SO4

1

Well Duplicate 2

g / c

COD TOC

Preservation Check: pH: 1

4042964-41 D 04.16.24 07:42

CG 250mL pH<2 w/HCL

1

Well Duplicate 2

g / c

Mercury Tot 245.7

4042964-41 E 04.16.24 07:42

CG 250mL pH<2 w/HCL

1

Well Duplicate 2

g / c

Mercury Tot 245.7

Preservation Check Performed by: SW

pH Paper Lot #: 228022

Field data collected by: Rachel H Collins

Date (mm/dd/yy) 04.16.24 Time (24 hr) 07:42

pH 6.39 Cond (umho) MS .527 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____

Temp (oC) 15.86 or (oF) _____ Static Water Level _____ DO (mg/L) 0.45 Turb. (NTU) 23.3

Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Rachel H Collins
Tim

Tim
Shay

4-17-24
4/19/24

12:48
11:37

Chain of Custody

Scheduled for: **04/17/2024**



Client: **Big Rivers Electric Corporation Wilson Station**

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: **Wilson Groundwater Wells 092-00004**

Phone: (270) 844-6000

PWS ID#:

State: ky

PO#: _____

Quote# _____

Please Print Legibly

Collected by (Signature): Rachel H Collins
required information

Compliance Monitoring? Yes ___ No ___

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ___ No ___

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY

required information

Workorder #

4042964

Sample ID#

Date

(mm/dd/yy):

Collection

Time (24 hr):

Bottle and Preservative

Containers

Sample Description

Composite

Sample Analysis Requested

4042964-41 F

04-16-24

07:42

Plastic 1L pH<2 w/HNO3
Rad 226 (Sub)

1

Well Duplicate 2

g / c

Radium 226 (sub)

Preservation Check: pH: 1

4042964-41 G

04-16-24

07:42

Plastic 1L pH<2 w/HNO3
Rad 228 (Sub)

1

Well Duplicate 2

g / c

Radium 228 (sub)

Preservation Check: pH: 1

4042964-41 H

04-16-24

07:42

Plastic 1L pH<2 w/HNO3
Rad 228 (Sub)

1

Well Duplicate 2

g / c

Radium 228 (sub)

Preservation Check: pH: 1

4042964-41 I

04-16-24

07:42

Plastic 1L pH<2 w/HNO3
(Sub)

1

Well Duplicate 2

g / c

Radium Total (sub)

Preservation Check: pH: 1

4042964-41 J

04-16-24

07:42

AG 250mL pH<2
w/H2SO4

1

Well Duplicate 2

g / c

TOC

Preservation Check: pH: ✓

4042964-42 A

04-16-24

07:42

CG 250mL pH<2 w/HCl
Field Blank

1

Mercury Field Blank Well
Dup-2

g / c

Mercury Tot 245.7 Field Blank

Preservation Check Performed by: SW

pH Paper Lot #: 228022

Field data collected by: Rachel H Collins

Date (mm/dd/yy) 04-16-24

Time (24 hr) 07:42

pH

6.39

Cond (umho) MS

.527

Res Cl (mg/L) _____

Tot Cl (mg/L) _____

Free Cl (mg/L) _____

Temp (oC)

15.86

or

(oF) _____

Static Water Level _____

DO (mg/L) 0.45

Turb. (NTU) 23.3

Flow: _____

☐ MGD

☐ CFS

☐ g/min

☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Rachel H Collins

[Signature]

4-17-24

12:48

[Signature]

[Signature]

4/19/24

11:37



PACE- Check here if trip charge applied to associated COC

Printed: 4/8/2024 9:35:38AM

Page 129 of 160

Chain of Custody

Scheduled for: 04/17/2024



Client: Big Rivers Electric Corporation Wilson Station

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: Wilson Groundwater Wells 092-00004

Phone: (270) 844-6000

PWS ID#:

State:

PO#:

Quote#

Please Print Legibly

Collected by (Signature): Asbury Hall

Compliance Monitoring? Yes ☐ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☐

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY

required information

Workorder #

Date

Collection

4042964

(mm/dd/yy):

Time (24 hr):

Bottle and Preservative

Containers

Sample Description

Composite

Sample Analysis Requested

Sample ID#

04/17/24 1030

Plastic 1L

1

Field Blank

g / c

Alkalinity Bicarbonate Alkalinity
Carbonate TDS Sulfate 300.0
Alkalinity Total Conductivity (Lab)
Chloride 300.0 Fluoride 300.0
Chromium Tot 6020 Arsenic To:
6020 Calcium Tot 6010B Cadmium
Tot 6020 Boron Tot 6010B Barium
Tot 6020 Lead Tot 6020 Antimony
Tot 6020 Beryllium Tot 6020 Cobalt
Tot 6020 Copper Tot 6020 Iron Tot
6010B Zinc Tot 6020 Lithium Tct
6020 Magnesium Tot 6010B

4042964-43 B

04/17/24 1030

Plastic 500mL pH<2
w/HNO3

1

Field Blank

g / c

Preservation Check: pH: ✓

4042964-43 C

04/17/24 1030

Plastic 500mL pH<2
w/H2SO4

1

Field Blank

g / c

COD TOC

Preservation Check: pH: ✓

4042964-43 D

04/17/24 1030

CG 250mL pH<2 w/HCL

1

Field Blank

g / c

Mercury Tot 245.7

4042964-43 E

04/17/24 1030

CG 250mL pH<2 w/HCL

1

Field Blank

g / c

Mercury Tot 245.7

Preservation Check Performed by: SN

pH Paper Lot #: 228,022

Field data collected by: Asbury Hall

Date (mm/dd/yy) 04/17/24 Time (24 hr) 1030

pH _____ Cond (umho) _____ Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____

Temp (oC) _____ or (oF) _____ Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____

Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Asbury Hall

Tracy Smith
Shang

4-17-24

12:48

4/19/24

11:37



PACE- Check here if trip charge applied to associated COC

Printed: 4/8/2024 9:35:38AM

Page 130 of 160

Chain of Custody

Scheduled for: 04/17/2024



Client: **Big Rivers Electric Corporation Wilson Station**

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station

Project: **Wilson Groundwater Wells 092-00004**

Dawn Storckman
PO Box 24
Henderson, KY 42419

Phone: (270) 844-6000

PWS ID#:

State: KY

PO#:

Quote#

Please Print Legibly

Collected by (Signature): Ashley Hall

Compliance Monitoring? Yes ☐ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☐

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY		*required information*		Containers	Sample Description	Composite	Sample Analysis Requested
Workorder #	Date	Collection	Bottle and Preservative				
4042964	(mm/dd/yy):	Time (24 hr):					
Sample ID#							
4042964-43 F	<u>04/17/24</u>	<u>1030</u>	Plastic 1L pH<2 w/HNO3 Rad 226 (Sub)	<u>1</u>	Field Blank	g / c	Radium 226 (sub)
			Preservation Check: pH :	<u>/</u>			
4042964-43 G	<u>04/17/24</u>	<u>1030</u>	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	<u>1</u>	Field Blank	g / c	Radium 228 (sub)
			Preservation Check: pH :	<u>/</u>			
4042964-43 H	<u>04/17/24</u>	<u>1030</u>	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	<u>1</u>	Field Blank	g / c	Radium 228 (sub)
			Preservation Check: pH :	<u>/</u>			
4042964-43 I	<u>04/17/24</u>	<u>1030</u>	Plastic 1L pH<2 w/HNO3 (Sub)	<u>1</u>	Field Blank	g / c	Radium Total (sub)
			Preservation Check: pH :	<u>/</u>			
4042964-43 J	<u>04/17/24</u>	<u>1030</u>	AG 250mL pH<2 w/H2SO4	<u>1</u>	Field Blank	g / c	TOC
			Preservation Check: pH :	<u>/</u>			
4042964-44 A	<u>04/17/24</u>	<u>1030</u>	CG 250mL pH<2 w/HCl Field Blank	<u>1</u>	Mercury Field Blank	g / c	Mercury Tot 245.7 Field Blank

Thermometer Serial Number
181390287
181460057
Temp 38 °C

Preservation Check Performed by: SW

pH Paper Lot #: 228022

Field data collected by: Ashley Hall Date (mm/dd/yy) 04/17/24 Time (24 hr) 1030

pH _____ Cond (umho) _____ Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____

Temp (oC) _____ or (oF) _____ Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____

Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Ashley Hall
[Signature]

[Signature]
[Signature]

4-17-24
4/19/24

12:48
11:37



May 17, 2024

Rob Whittington
Pace Analytical Madisonville
825 Industrial Rd
Madisonville, KY 42431

RE: Project: 4042964
Pace Project No.: 30678403

Dear Rob Whittington:

Enclosed are the analytical results for sample(s) received by the laboratory on April 23, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Greensburg

Greensburg, PA - Revision - This report replaces the 05/14/2024 report. This project was revised on 05/17/2024 in order to add QC sheets.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Theresa A. Wilson
theresa.wilson@pacelabs.com
(724)850-5600
Project Manager

Enclosures

cc: Mark Demoss, Pace Analytical Madisonville



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 4042964

Pace Project No.: 30678403

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

ANAB DOD-ELAP Rad Accreditation #: L2417

ANABISO/IEC 17025:2017 Rad Cert#: L24170

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 2950

Colorado Certification #: PA01547

Connecticut Certification #: PH-0694

EPA Region 4 DW Rad

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas Certification #: E-10358

Kentucky Certification #: KY90133

KY WW Permit #: KY0098221

KY WW Permit #: KY0000221

Louisiana DHH/TNI Certification #: LA010

Louisiana DEQ/TNI Certification #: 04086

Maine Certification #: 2023021

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification #: 9991

Missouri Certification #: 235

Montana Certification #: Cert0082

Nebraska Certification #: NE-OS-29-14

Nevada Certification #: PA014572023-03

New Hampshire/TNI Certification #: 297622

New Jersey/TNI Certification #: PA051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Ohio EPA Rad Approval: #41249

Oregon/TNI Certification #: PA200002-015

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: TN02867

Texas/TNI Certification #: T104704188-22-18

Utah/TNI Certification #: PA014572223-14

USDA Soil Permit #: 525-23-67-77263

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 460198

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Approve List for Rad

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 4042964
Pace Project No.: 30678403

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30678403001	Well 1	Water	04/17/24 07:10	04/23/24 09:40
30678403002	Well 2	Water	04/17/24 11:10	04/23/24 09:40
30678403003	Well 3	Water	04/17/24 11:10	04/23/24 09:40
30678403004	Well 4	Water	04/17/24 08:25	04/23/24 09:40
30678403005	Well 4D	Water	04/17/24 09:45	04/23/24 09:40
30678403006	Well 5	Water	04/17/24 07:30	04/23/24 09:40
30678403007	Well 5MS	Water	04/17/24 07:30	04/23/24 09:40
30678403008	Well 5MSD	Water	04/17/24 07:30	04/23/24 09:40
30678403009	Well 6	Water	04/16/24 13:50	04/23/24 09:40
30678403010	Well 7	Water	04/16/24 12:40	04/23/24 09:40
30678403011	Well 8	Water	04/16/24 12:40	04/23/24 09:40
30678403012	Well 10	Water	04/16/24 09:05	04/23/24 09:40
30678403013	Well 10D	Water	04/16/24 07:45	04/23/24 09:40
30678403014	Well 102	Water	04/16/24 10:50	04/23/24 09:40
30678403015	Well 104	Water	04/16/24 14:35	04/23/24 09:40
30678403016	Well 105R	Water	04/16/24 07:40	04/23/24 09:40
30678403017	Well 110	Water	04/16/24 07:20	04/23/24 09:40
30678403018	Well 111	Water	04/16/24 09:25	04/23/24 09:40
30678403019	Well 112	Water	04/16/24 09:15	04/23/24 09:40
30678403020	Well 113	Water	04/16/24 09:50	04/23/24 09:40
30678403021	Well 114	Water	04/16/24 12:45	04/23/24 09:40
30678403022	Well Duplicate 1	Water	04/16/24 11:33	04/23/24 09:40
30678403023	Well Duplicate 2	Water	04/16/24 07:42	04/23/24 09:40
30678403024	Field Blank	Water	04/16/24 10:30	04/23/24 09:40

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 4042964
Pace Project No.: 30678403

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30678403001	Well 1	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30678403002	Well 2	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30678403003	Well 3	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30678403004	Well 4	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30678403005	Well 4D	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30678403006	Well 5	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30678403007	Well 5MS	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30678403008	Well 5MSD	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30678403009	Well 6	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30678403010	Well 7	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30678403011	Well 8	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30678403012	Well 10	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30678403013	Well 10D	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 4042964
Pace Project No.: 30678403

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30678403014	Well 102	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30678403015	Well 104	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30678403016	Well 105R	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30678403017	Well 110	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30678403018	Well 111	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30678403019	Well 112	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30678403020	Well 113	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30678403021	Well 114	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30678403022	Well Duplicate 1	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30678403023	Well Duplicate 2	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30678403024	Field Blank	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 4042964
Pace Project No.: 30678403

Sample: Well 1 **Lab ID: 30678403001** Collected: 04/17/24 07:10 Received: 04/23/24 09:40 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Samplers name and signature not listed on COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	-0.206 ± 0.701 (1.43) C:NA T:89%	pCi/L	05/10/24 14:06	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.359 ± 0.325 (0.659) C:93% T:88%	pCi/L	05/03/24 15:39	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.359 ± 1.03 (2.09)	pCi/L	05/13/24 10:47	7440-14-4	

Sample: Well 2 **Lab ID: 30678403002** Collected: 04/17/24 11:10 Received: 04/23/24 09:40 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Samplers name and signature not listed on COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.187 ± 0.367 (0.671) C:NA T:91%	pCi/L	05/10/24 14:06	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.498 ± 0.397 (0.784) C:85% T:76%	pCi/L	05/03/24 15:39	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.685 ± 0.764 (1.46)	pCi/L	05/13/24 10:47	7440-14-4	

Sample: Well 3 **Lab ID: 30678403003** Collected: 04/17/24 11:10 Received: 04/23/24 09:40 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Samplers name and signature not listed on COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.762 ± 0.508 (0.631) C:NA T:89%	pCi/L	05/10/24 14:06	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.970 ± 0.433 (0.723) C:87% T:87%	pCi/L	05/03/24 15:39	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.73 ± 0.941 (1.35)	pCi/L	05/13/24 10:47	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 4042964
Pace Project No.: 30678403

Sample: Well 4 **Lab ID: 30678403004** Collected: 04/17/24 08:25 Received: 04/23/24 09:40 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Samplers name and signature not listed on COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	-0.132 ± 0.894 (1.71) C:NA T:86%	pCi/L	05/10/24 14:06	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.861 ± 0.414 (0.724) C:91% T:89%	pCi/L	05/03/24 15:39	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.861 ± 1.31 (2.43)	pCi/L	05/13/24 10:47	7440-14-4	

Sample: Well 4D **Lab ID: 30678403005** Collected: 04/17/24 09:45 Received: 04/23/24 09:40 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Samplers name and signature not listed on COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.655 ± 0.894 (1.51) C:NA T:88%	pCi/L	05/10/24 14:06	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.991 ± 0.464 (0.798) C:85% T:88%	pCi/L	05/03/24 15:39	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.65 ± 1.36 (2.31)	pCi/L	05/13/24 10:47	7440-14-4	

Sample: Well 5 **Lab ID: 30678403006** Collected: 04/17/24 07:30 Received: 04/23/24 09:40 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Samplers name and signature not listed on COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	-0.153 ± 0.591 (1.17) C:NA T:90%	pCi/L	05/10/24 14:06	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	1.37 ± 0.466 (0.639) C:94% T:84%	pCi/L	05/03/24 15:40	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.37 ± 1.06 (1.81)	pCi/L	05/13/24 10:47	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 4042964
Pace Project No.: 30678403

Sample: Well 5MS **Lab ID: 30678403007** Collected: 04/17/24 07:30 Received: 04/23/24 09:40 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Samplers name and signature not listed on COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	108.47 %REC ± NA (NA) C:NA T:NA	pCi/L	05/10/24 14:06	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	86.68 %REC ± NA (NA) C:NA T:NA	pCi/L	05/03/24 15:40	15262-20-1	

Sample: Well 5MSD **Lab ID: 30678403008** Collected: 04/17/24 07:30 Received: 04/23/24 09:40 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Samplers name and signature not listed on COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	124.55 %REC 13.80RPD ± NA (NA) C:NA T:NA	pCi/L	05/10/24 14:20	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	87.47 %REC 0.91RPD ± NA (NA) C:NA T:NA	pCi/L	05/03/24 15:40	15262-20-1	

Sample: Well 6 **Lab ID: 30678403009** Collected: 04/16/24 13:50 Received: 04/23/24 09:40 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Samplers name and signature not listed on COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.391 ± 0.544 (0.919) C:NA T:85%	pCi/L	05/10/24 14:20	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.554 ± 0.350 (0.663) C:93% T:89%	pCi/L	05/03/24 15:39	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.945 ± 0.894 (1.58)	pCi/L	05/13/24 10:47	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 4042964
Pace Project No.: 30678403

Sample: Well 7 **Lab ID: 30678403010** Collected: 04/16/24 12:40 Received: 04/23/24 09:40 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Samplers name and signature not listed on COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.522 ± 0.575 (0.920) C:NA T:89%	pCi/L	05/10/24 14:20	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.557 ± 0.387 (0.750) C:86% T:85%	pCi/L	05/03/24 15:40	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.08 ± 0.962 (1.67)	pCi/L	05/13/24 10:47	7440-14-4	

Sample: Well 8 **Lab ID: 30678403011** Collected: 04/16/24 12:40 Received: 04/23/24 09:40 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Samplers name and signature not listed on COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.0585 ± 0.525 (1.02) C:NA T:92%	pCi/L	05/10/24 14:20	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	1.12 ± 0.427 (0.637) C:91% T:88%	pCi/L	05/03/24 15:40	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.18 ± 0.952 (1.66)	pCi/L	05/13/24 10:47	7440-14-4	

Sample: Well 10 **Lab ID: 30678403012** Collected: 04/16/24 09:05 Received: 04/23/24 09:40 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Samplers name and signature not listed on COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	-0.311 ± 0.610 (1.29) C:NA T:88%	pCi/L	05/10/24 14:20	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.298 ± 0.331 (0.693) C:91% T:88%	pCi/L	05/03/24 15:40	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.298 ± 0.941 (1.98)	pCi/L	05/13/24 10:47	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 4042964
Pace Project No.: 30678403

Sample: Well 10D **Lab ID: 30678403013** Collected: 04/16/24 07:45 Received: 04/23/24 09:40 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Samplers name and signature not listed on COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.540 ± 0.838 (1.44) C:NA T:91%	pCi/L	05/10/24 14:20	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	1.31 ± 0.475 (0.697) C:87% T:88%	pCi/L	05/03/24 15:40	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.85 ± 1.31 (2.14)	pCi/L	05/13/24 10:47	7440-14-4	

Sample: Well 102 **Lab ID: 30678403014** Collected: 04/16/24 10:50 Received: 04/23/24 09:40 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Samplers name and signature not listed on COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.536 ± 0.513 (0.781) C:NA T:88%	pCi/L	05/10/24 14:20	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.727 ± 0.383 (0.673) C:81% T:89%	pCi/L	05/03/24 15:40	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.26 ± 0.896 (1.45)	pCi/L	05/13/24 10:47	7440-14-4	

Sample: Well 104 **Lab ID: 30678403015** Collected: 04/16/24 14:35 Received: 04/23/24 09:40 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Samplers name and signature not listed on COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.189 ± 0.644 (1.19) C:NA T:90%	pCi/L	05/10/24 14:20	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	1.22 ± 0.481 (0.751) C:84% T:87%	pCi/L	05/03/24 15:40	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.41 ± 1.13 (1.94)	pCi/L	05/13/24 10:47	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 4042964
Pace Project No.: 30678403

Sample: Well 105R **Lab ID: 30678403016** Collected: 04/16/24 07:40 Received: 04/23/24 09:40 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Samplers name and signature not listed on COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.981 ± 0.709 (0.988) C:NA T:81%	pCi/L	05/10/24 14:32	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	1.55 ± 0.520 (0.683) C:83% T:83%	pCi/L	05/03/24 15:38	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	2.53 ± 1.23 (1.67)	pCi/L	05/13/24 10:47	7440-14-4	

Sample: Well 110 **Lab ID: 30678403017** Collected: 04/16/24 07:20 Received: 04/23/24 09:40 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Samplers name and signature not listed on COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.937 ± 0.652 (0.878) C:NA T:80%	pCi/L	05/10/24 14:32	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.602 ± 0.356 (0.639) C:79% T:86%	pCi/L	05/03/24 15:38	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.54 ± 1.01 (1.52)	pCi/L	05/13/24 10:47	7440-14-4	

Sample: Well 111 **Lab ID: 30678403018** Collected: 04/16/24 09:25 Received: 04/23/24 09:40 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Samplers name and signature not listed on COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	-0.119 ± 0.523 (1.08) C:NA T:89%	pCi/L	05/10/24 14:32	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	1.12 ± 0.420 (0.602) C:83% T:90%	pCi/L	05/03/24 15:39	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.12 ± 0.943 (1.68)	pCi/L	05/13/24 10:47	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 4042964
Pace Project No.: 30678403

Sample: Well 112 **Lab ID: 30678403019** Collected: 04/16/24 09:15 Received: 04/23/24 09:40 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Samplers name and signature not listed on COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	-0.0592 ± 0.761 (1.45) C:NA T:88%	pCi/L	05/10/24 14:32	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.769 ± 0.381 (0.650) C:86% T:85%	pCi/L	05/03/24 15:39	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.769 ± 1.14 (2.10)	pCi/L	05/13/24 10:47	7440-14-4	

Sample: Well 113 **Lab ID: 30678403020** Collected: 04/16/24 09:50 Received: 04/23/24 09:40 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Samplers name and signature not listed on COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	1.29 ± 0.761 (0.943) C:NA T:84%	pCi/L	05/10/24 14:32	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	1.83 ± 0.574 (0.746) C:85% T:85%	pCi/L	05/03/24 15:39	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	3.12 ± 1.34 (1.69)	pCi/L	05/13/24 10:47	7440-14-4	

Sample: Well 114 **Lab ID: 30678403021** Collected: 04/16/24 12:45 Received: 04/23/24 09:40 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Samplers name and signature not listed on COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	-0.106 ± 1.19 (2.31) C:NA T:84%	pCi/L	05/03/24 14:19	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	2.23 ± 0.621 (0.683) C:78% T:85%	pCi/L	04/30/24 11:30	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	2.23 ± 1.81 (2.99)	pCi/L	05/06/24 11:19	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 4042964
Pace Project No.: 30678403

Sample: Well Duplicate 1 **Lab ID: 30678403022** Collected: 04/16/24 11:33 Received: 04/23/24 09:40 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Samplers name and signature not listed on COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.626 ± 1.10 (1.91) C:NA T:87%	pCi/L	05/03/24 14:19	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.933 ± 0.464 (0.825) C:79% T:83%	pCi/L	04/30/24 11:31	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.56 ± 1.56 (2.74)	pCi/L	05/06/24 11:19	7440-14-4	

Sample: Well Duplicate 2 **Lab ID: 30678403023** Collected: 04/16/24 07:42 Received: 04/23/24 09:40 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Samplers name and signature not listed on COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	1.06 ± 0.894 (1.33) C:NA T:82%	pCi/L	05/03/24 14:34	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	1.12 ± 0.475 (0.784) C:79% T:85%	pCi/L	04/30/24 11:31	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	2.18 ± 1.37 (2.11)	pCi/L	05/06/24 11:19	7440-14-4	

Sample: Field Blank **Lab ID: 30678403024** Collected: 04/16/24 10:30 Received: 04/23/24 09:40 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Samplers name and signature not listed on COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	-0.797 ± 0.771 (1.74) C:NA T:91%	pCi/L	05/03/24 14:34	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.421 ± 0.402 (0.827) C:85% T:84%	pCi/L	04/30/24 14:37	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.421 ± 1.17 (2.57)	pCi/L	05/06/24 11:19	7440-14-4	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 4042964

Pace Project No.: 30678403

QC Batch:	664277	Analysis Method:	EPA 903.1
QC Batch Method:	EPA 903.1	Analysis Description:	903.1 Radium-226
		Laboratory:	Pace Analytical Services - Greensburg
Associated Lab Samples:	30678403001, 30678403002, 30678403003, 30678403004, 30678403005, 30678403006, 30678403007, 30678403008, 30678403009, 30678403010, 30678403011, 30678403012, 30678403013, 30678403014, 30678403015, 30678403016, 30678403017, 30678403018, 30678403019, 30678403020		

METHOD BLANK:	3234244	Matrix:	Water
Associated Lab Samples:	30678403001, 30678403002, 30678403003, 30678403004, 30678403005, 30678403006, 30678403007, 30678403008, 30678403009, 30678403010, 30678403011, 30678403012, 30678403013, 30678403014, 30678403015, 30678403016, 30678403017, 30678403018, 30678403019, 30678403020		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.309 ± 0.232 (0.120) C:NA T:90%	pCi/L	05/10/24 14:06	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 4042964
Pace Project No.: 30678403

QC Batch:	664523	Analysis Method:	EPA 903.1
QC Batch Method:	EPA 903.1	Analysis Description:	903.1 Radium-226
		Laboratory:	Pace Analytical Services - Greensburg
Associated Lab Samples:	30678403021, 30678403022, 30678403023, 30678403024		

METHOD BLANK:	3235457	Matrix:	Water
Associated Lab Samples:	30678403021, 30678403022, 30678403023, 30678403024		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0664 ± 0.303 (0.616) C:NA T:88%	pCi/L	05/03/24 14:06	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 4042964

Pace Project No.: 30678403

QC Batch:	664278	Analysis Method:	EPA 904.0
QC Batch Method:	EPA 904.0	Analysis Description:	904.0 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg
Associated Lab Samples:	30678403001, 30678403002, 30678403003, 30678403004, 30678403005, 30678403006, 30678403007, 30678403008, 30678403009, 30678403010, 30678403011, 30678403012, 30678403013, 30678403014, 30678403015, 30678403016, 30678403017, 30678403018, 30678403019, 30678403020		

METHOD BLANK:	3234248	Matrix:	Water
Associated Lab Samples:	30678403001, 30678403002, 30678403003, 30678403004, 30678403005, 30678403006, 30678403007, 30678403008, 30678403009, 30678403010, 30678403011, 30678403012, 30678403013, 30678403014, 30678403015, 30678403016, 30678403017, 30678403018, 30678403019, 30678403020		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0310 ± 0.271 (0.629) C:91% T:85%	pCi/L	05/03/24 15:40	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 4042964
Pace Project No.: 30678403

QC Batch:	664522	Analysis Method:	EPA 904.0
QC Batch Method:	EPA 904.0	Analysis Description:	904.0 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 30678403021, 30678403022, 30678403023, 30678403024

METHOD BLANK: 3235456 Matrix: Water

Associated Lab Samples: 30678403021, 30678403022, 30678403023, 30678403024

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.692 ± 0.337 (0.567) C:84% T:90%	pCi/L	04/30/24 10:44	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 4042964
Pace Project No.: 30678403

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: For Safe Drinking Water Act (SDWA) analyses, the reported Unc. is the calculated Count Uncertainty (95% confidence interval) using a coverage factor of 1.96. For all other matrices (non-SDWA), the reported Unc. is the calculated Expanded Uncertainty (aka Combined Standard Uncertainty, CSU), reported at the 95% confidence interval using a coverage factor of 1.96.

Gamma Spec: The Unc. reported for all gamma-spectroscopy analyses (EPA 901.1), is the calculated Expanded Uncertainty (CSU) at the 95.4% confidence interval, using a coverage factor of 2.0.

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SUBCONTRACT ORDER
Pace Analytical Services, LLC Kent
4042964

WO#: 30678403



SENDING LABORATORY:

Pace Analytical Services, LLC Kentucky
PO BOX 907
Madisonville, KY 42431
Phone: (270) 821-7375
Fax: 844-270-7904
Project Manager: Rob Whittington

RECEIVING LABORATORY:

Pace Analytical Services LLC Greensburg PA
1638 Rosey Town Rd Suite 2,3,4
Greensburg, PA 15601
Phone : (724) 850-5615
Fax:

Analysis	Expires	Laboratory ID	Comments
Well 1			
Sample ID: 4042964-01	Water	Sampled:04/17/2024 07:10	Specific Method 001
Radium 228 (sub)	10/14/2024 07:10	EPA 904.0 Radium Sum C	
Radium Total (sub)	10/14/2024 07:10	EPA 904.0 Radium Sum C	
Radium 226 (sub)	10/14/2024 07:10	EPA 903.1	

SAMPLE STATE OF ORIGIN

Ky

RUSH MULTIPLIER

0

Well 2			
Sample ID: 4042964-03	Water	Sampled:04/17/2024 11:10	Specific Method 002
Radium 226 (sub)	10/14/2024 11:10	EPA 903.1	
Radium 228 (sub)	10/14/2024 11:10	EPA 904.0 Radium Sum C	
Radium Total (sub)	10/14/2024 11:10	EPA 904.0 Radium Sum C	

SAMPLE STATE OF ORIGIN

Ky

RUSH MULTIPLIER

0

Well 3			
Sample ID: 4042964-05	Water	Sampled:04/17/2024 11:10	Specific Method 003
Radium 226 (sub)	10/14/2024 11:10	EPA 903.1	
Radium 228 (sub)	10/14/2024 11:10	EPA 904.0 Radium Sum C	
Radium Total (sub)	10/14/2024 11:10	EPA 904.0 Radium Sum C	

SAMPLE STATE OF ORIGIN

Ky

RUSH MULTIPLIER

0

Received by Pace Greensburg
Therm ID 17 Corr Factor +/- 0.4
Receipt Temp 3.8
Corrected Temp 3.4
Correct Preservation Y/N

Released By

Date

4/22/24

Received By

Date

4-23-24 0940

Released By

Date

Received By

Date

SUBCONTRACT ORDER
Pace Analytical Services, LLC Kentu
4042964

WO#: 30678403

PM: TAW Due Date: 05/14/24
CLIENT: PACE_44_MVKY

Analysis	Expires	Laboratory ID	Comments
----------	---------	---------------	----------

Well 4
Sample ID: 4042964-07 Water Sampled: 04/17/2024 08:25 Specific Method 004
Radium 226 (sub) 10/14/2024 08:25 EPA 903.1
Radium 228 (sub) 10/14/2024 08:25 EPA 904.0 Radium Sum C
Radium Total (sub) 10/14/2024 08:25 EPA 904.0 Radium Sum C

SAMPLE STATE OF ORIGIN Ky RUSH MULTIPLIER 0

Well 4D
Sample ID: 4042964-09 Water Sampled: 04/17/2024 09:45 Specific Method 005
Radium 226 (sub) 10/14/2024 09:45 EPA 903.1
Radium Total (sub) 10/14/2024 09:45 EPA 904.0 Radium Sum C
Radium 228 (sub) 10/14/2024 09:45 EPA 904.0 Radium Sum C

SAMPLE STATE OF ORIGIN Ky RUSH MULTIPLIER 0

Well 5
Sample ID: 4042964-11 Water Sampled: 04/17/2024 07:30 Specific Method 006, 007, 008
Radium 226 (sub) 10/14/2024 07:30 EPA 903.1
Radium 228 (sub) 10/14/2024 07:30 EPA 904.0 Radium Sum C
Radium Total (sub) 10/14/2024 07:30 EPA 904.0 Radium Sum C

SAMPLE STATE OF ORIGIN Ky RUSH MULTIPLIER 0

Well 6
Sample ID: 4042964-13 Water Sampled: 04/16/2024 13:50 Specific Method 009
Radium 228 (sub) 10/13/2024 13:50 EPA 904.0 Radium Sum C
Radium 226 (sub) 10/13/2024 13:50 EPA 903.1
Radium Total (sub) 10/13/2024 13:50 EPA 904.0 Radium Sum C

SAMPLE STATE OF ORIGIN Ky RUSH MULTIPLIER 0

Released By [Signature] Date 4/22/24 Received By [Signature] Date 4-23-24 amc

Released By _____ Date _____ Received By _____ Date _____

SUBCONTRACT ORDER

Pace Analytical Services, LLC Kent
4042964

WO#: 30678403

PM: TAW

Due Date: 05/14/24

CLIENT: PACE_44_MVKY

Analysis	Expires	Laboratory ID	Comments
Well 7 Sample ID: 4042964-15	Water	Sampled: 04/16/2024 12:40	Specific Method
Radium 226 (sub)	10/13/2024 12:40	EPA 903.1	010
Radium 228 (sub)	10/13/2024 12:40	EPA 904.0 Radium Sum C	
Radium Total (sub)	10/13/2024 12:40	EPA 904.0 Radium Sum C	

SAMPLE STATE OF ORIGIN

Ky

RUSH MULTIPLIER

0

Well 8 Sample ID: 4042964-17	Water	Sampled: 04/16/2024 12:40	Specific Method
Radium 226 (sub)	10/13/2024 12:40	EPA 903.1	011
Radium 228 (sub)	10/13/2024 12:40	EPA 904.0 Radium Sum C	
Radium Total (sub)	10/13/2024 12:40	EPA 904.0 Radium Sum C	

SAMPLE STATE OF ORIGIN

Ky

RUSH MULTIPLIER

0

Well 10 Sample ID: 4042964-19	Water	Sampled: 04/16/2024 09:05	Specific Method
Radium Total (sub)	10/13/2024 09:05	EPA 904.0 Radium Sum C	012
Radium 228 (sub)	10/13/2024 09:05	EPA 904.0 Radium Sum C	
Radium 226 (sub)	10/13/2024 09:05	EPA 903.1	

SAMPLE STATE OF ORIGIN

Ky

RUSH MULTIPLIER

0

Well 10D Sample ID: 4042964-21	Water	Sampled: 04/16/2024 07:45	Specific Method
Radium 228 (sub)	10/13/2024 07:45	EPA 904.0 Radium Sum C	013
Radium 226 (sub)	10/13/2024 07:45	EPA 903.1	
Radium Total (sub)	10/13/2024 07:45	EPA 904.0 Radium Sum C	

SAMPLE STATE OF ORIGIN

Ky

RUSH MULTIPLIER

0

Released By

Date

Received By

Date

Released By

Date

Received By

Date

SUBCONTRACT ORDER

Pace Analytical Services, LLC Kentuc
4042964

WO#: 30678403

PM: TAW

Due Date: 05/14/24

CLIENT: PACE_44_MVKY

Analysis	Expires	Laboratory ID	Comments
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Well 102

Sample ID: 4042964-23

Water

Sampled:04/16/2024 10:50

Specific Method

014

Radium Total (sub)

10/13/2024 10:50

EPA 904.0 Radium Sum C

Radium 226 (sub)

10/13/2024 10:50

EPA 903.1

Radium 228 (sub)

10/13/2024 10:50

EPA 904.0 Radium Sum C

SAMPLE STATE OF ORIGIN

Ky

RUSH MULTIPLIER

0

Well 104

Sample ID: 4042964-25

Water

Sampled:04/16/2024 14:35

Specific Method

015

Radium 226 (sub)

10/13/2024 14:35

EPA 903.1

Radium 228 (sub)

10/13/2024 14:35

EPA 904.0 Radium Sum C

Radium Total (sub)

10/13/2024 14:35

EPA 904.0 Radium Sum C

SAMPLE STATE OF ORIGIN

Ky

RUSH MULTIPLIER

0

Well 105R

Sample ID: 4042964-27

Water

Sampled:04/16/2024 07:40

Specific Method

016

Radium 226 (sub)

10/13/2024 07:40

EPA 903.1

Radium 228 (sub)

10/13/2024 07:40

EPA 904.0 Radium Sum C

Radium Total (sub)

10/13/2024 07:40

EPA 904.0 Radium Sum C

SAMPLE STATE OF ORIGIN

Ky

RUSH MULTIPLIER

0

Well 110

Sample ID: 4042964-29

Water

Sampled:04/16/2024 07:20

Specific Method

017

Radium Total (sub)

10/13/2024 07:20

EPA 904.0 Radium Sum C

Radium 226 (sub)

10/13/2024 07:20

EPA 903.1

Radium 228 (sub)

10/13/2024 07:20

EPA 904.0 Radium Sum C

SAMPLE STATE OF ORIGIN

Ky

RUSH MULTIPLIER

0

Released By

Date

Received By

Date

Released By

Date

Received By

Date

SUBCONTRACT ORDER

Pace Analytical Services, LLC Kentuc
4042964

WO#: 30678403

PM: TAW

Due Date: 05/14/24

CLIENT: PACE_44_MVKY

Analysis	Expires	Laboratory ID	Comments
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Well 111

Sample ID: 4042964-31	Water	Sampled:04/16/2024 09:25	Specific Method	018
Radium 226 (sub)		10/13/2024 09:25	EPA 903.1	
Radium Total (sub)		10/13/2024 09:25	EPA 904.0 Radium Sum C	
Radium 228 (sub)		10/13/2024 09:25	EPA 904.0 Radium Sum C	

SAMPLE STATE OF ORIGIN

Ky

RUSH MULTIPLIER

0

Well 112

Sample ID: 4042964-33	Water	Sampled:04/16/2024 09:15	Specific Method	019
Radium 226 (sub)		10/13/2024 09:15	EPA 903.1	
Radium Total (sub)		10/13/2024 09:15	EPA 904.0 Radium Sum C	
Radium 228 (sub)		10/13/2024 09:15	EPA 904.0 Radium Sum C	

SAMPLE STATE OF ORIGIN

Ky

RUSH MULTIPLIER

0

Well 113

Sample ID: 4042964-35	Water	Sampled:04/16/2024 09:50	Specific Method	020
Radium Total (sub)		10/13/2024 09:50	EPA 904.0 Radium Sum C	
Radium 226 (sub)		10/13/2024 09:50	EPA 903.1	
Radium 228 (sub)		10/13/2024 09:50	EPA 904.0 Radium Sum C	

SAMPLE STATE OF ORIGIN

Ky

RUSH MULTIPLIER

0

Well 114

Sample ID: 4042964-37	Water	Sampled:04/16/2024 12:45	Specific Method	021
Radium Total (sub)		10/13/2024 12:45	EPA 904.0 Radium Sum C	
Radium 226 (sub)		10/13/2024 12:45	EPA 903.1	
Radium 228 (sub)		10/13/2024 12:45	EPA 904.0 Radium Sum C	

SAMPLE STATE OF ORIGIN

Ky

RUSH MULTIPLIER

0

Released By

Date

Received By

Date

Released By

Date

Received By

Date

SUBCONTRACT ORDER

Pace Analytical Services, LLC Kentucky

4042964

Analysis	Expires	Laboratory ID	Comments
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Well Duplicate 1

Sample ID: 4042964-39	Water	Sampled:04/16/2024 11:33	Specific Method 022
-----------------------	-------	--------------------------	--

Radium Total (sub)	10/13/2024 11:33	EPA 904.0 Radium Sum C	
--------------------	------------------	------------------------	--

Radium 226 (sub)	10/13/2024 11:33	EPA 903.1	
------------------	------------------	-----------	--

Radium 228 (sub)	10/13/2024 11:33	EPA 904.0 Radium Sum C	
------------------	------------------	------------------------	--

SAMPLE STATE OF ORIGIN

Ky

RUSH MULTIPLIER

0

Well Duplicate 2

Sample ID: 4042964-41	Water	Sampled:04/16/2024 07:42	Specific Method 023
-----------------------	-------	--------------------------	--

Radium 226 (sub)	10/13/2024 07:42	EPA 903.1	
------------------	------------------	-----------	--

Radium 228 (sub)	10/13/2024 07:42	EPA 904.0 Radium Sum C	
------------------	------------------	------------------------	--

Radium Total (sub)	10/13/2024 07:42	EPA 904.0 Radium Sum C	
--------------------	------------------	------------------------	--

SAMPLE STATE OF ORIGIN

Ky

RUSH MULTIPLIER

0

Field Blank

Sample ID: 4042964-43	Water	Sampled:04/17/2024 10:30	Specific Method 024
-----------------------	-------	--------------------------	--

Radium Total (sub)	10/14/2024 10:30	EPA 904.0 Radium Sum C	
--------------------	------------------	------------------------	--

Radium 226 (sub)	10/14/2024 10:30	EPA 903.1	
------------------	------------------	-----------	--

Radium 228 (sub)	10/14/2024 10:30	EPA 904.0 Radium Sum C	
------------------	------------------	------------------------	--

SAMPLE STATE OF ORIGIN

Ky

RUSH MULTIPLIER

0

WO# : 30678403

PM: TAW

Due Date: 05/14/24

CLIENT: PACE_44_MVKY

Released By

Date

Received By

Date

Released By

Date

Received By

Date

ENV-FRM-GBUR-0088 v07_Sample Condition Upon Receipt-Greensburg

Effective Date: 01/04/2024

WO#: 30678403

PM: TAW

Due Date: 05/14/24

Client Name:

Pace - KY

CLIENT: PACE_44_MVKY

Initial / Date

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other

Tracking Number: 11073394 4660

Examined By: PS 4/23/24

Labeled By: PS 4/23/24

Temped By: PS 4/23/24

Custody Seal on Cooler/Box Present: ☐ Yes ☒ NoSeals Intact: ☐ Yes ☒ No

Thermometer Used: 17

Type of Ice: Wet Blue None

Cooler Temperature: Observed Temp 2.7 °C

Correction Factor: -0.4 °C

Final Temp: 2.3 °C

Temp should be above freezing to 6°C

Cooler 1

Comments:	Yes	No	NA	pH paper Lot#	D.P.D. Residual Chlorine Lot #
Chain of Custody Present	/			1002431	
Chain of Custody Filled Out:	/			1.	
-Were client corrections present on COC		/		2.	
Chain of Custody Relinquished	/			3.	
Sampler Name & Signature on COC:		/		4.	
Sample Labels match COC:		/		5.	
-Includes date/time/ID					
Matrix:					
Samples Arrived within Hold Time:	/			6.	
Short Hold Time Analysis (<72hr remaining):		/		7.	
Rush Turn Around Time Requested:		/		8.	
Sufficient Volume:	/			9.	
Correct Containers Used:	/			10.	
-Pace Containers Used		/			
Containers Intact:	/			11.	
Orthophosphate field filtered:			/	12.	
Hex Cr Aqueous samples field filtered:			/	13.	
Organic Samples checked for dechlorination			/	14.	
Filtered volume received for dissolved tests:			/	15.	
All containers checked for preservation:	/			16.	
exceptions: VOA, coliform, TOC, O&G,					
Phenolics, Radon, non-aqueous matrix					
All containers meet method preservation requirements:	/				
8260C/D: Headspace in VOA Vials (> 6mm)			/	17.	
624.1: Headspace in VOA Vials (0mm)			/	18.	
Radon: Headspace in RAD Vials (0mm)			/	19.	
Trip Blank Present:			/		
Rad Samples Screened <.05 mrem/hr.	/				
Initial when completed					
Date:					
Survey Meter SN:					
Comments:					

Note: For NC compliance samples with discrepancies, a copy of this form must be sent to the DEHNR Certification office.
PM Review is documented electronically in LIMS through the SRF Review schedule in the Workorder Edit Screen.

• Cooler # 2 - (1107 3394 4660) Temp gun # 17 - 1.4 °C (CF - 0.4 °C) = 1.0 °C Final

• Cooler # 3 - (1107 3394 4671) Temp gun # 17 - 1.3 °C (CF - 0.4 °C) = 0.9 °C Final

• Cooler # 4 - (1107 3394 4660) Temp gun # 17 - 2.8 °C (CF - 0.4 °C) = 2.4 °C Final

• Cooler # 5 - (1107 3394 4693) Temp gun # 17 - 2.1 °C (CF - 0.4 °C) = 1.7 °C Final

Client

Site 4042964

Page 1 of 2

Profile/EZ Login Number

11851

Note: Log MS/MSD on 006,007,008.
ms MSD

Sample Line Item	Matrix	Amber Glass					Plastic								Vials					Other								
		AG1H	AG3S	AG3U	AG5U	AG5T	BP1N	BP1U	BP2S	BP2U	BP3B	BP3N	BP3S	BP3U	DG9S	VG9H	VG9T	VG9U	VOAK	WGFU	WGKU	ZPLC	GCUB	GJN	12GN	AG1U	BG1U	BP2N
001	WT						3																					
002							3																					
003							3																					
004							3																					
005							3																					
006							2																					
007							2																					
008							2																					
009							3																					
010							3																					
011							3																					
012							3																					

Container Codes

Glass		Plastic/Misc.	
GJN	1 Gallon Jug with HNO3	DG9S	40mL amber VOA vial H2SO4
AG5U		1/2 gal	40mL clear VOA vial
AG5T			clear VOA vial Na Thiosulfate
GJN			clear VOA vial HCl
AG1S			amber wide jar
AG1H			amber wide jar
AG1T			clear glass unpreserved
BG1U	1L clear glass unpreserved	AG2U	500mL amber glass unpreserved
AG3S	250mL amber glass H2SO4	WGKU	8oz wide jar unpreserved
	250mL amber glass unpreserved	GN	General

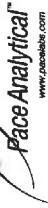
W0#: 30678403

PM: TAW Due Date: 05/14/24

CLIENT: PACE_44_MVKY

Page 27 of 29
Page 158 of 160

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: ZPC
Date: 4/30/2024
Worklist: 78828
Matrix: WT

Method Blank Assessment	
MB Sample ID	3234248
MB concentration:	0.031
M/B 2 Sigma CSU:	0.271
MB MDC:	0.629
MB Numerical Performance Indicator:	0.22
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCS#	78828
Count Date:	5/3/2024
Spike ID:	23-043
Decay Corrected Spike Concentration (pCi/mL):	36.890
Volume Used (mL):	0.10
Alliquot Volume (L, g, F):	0.822
Target Conc. (pCi/L, g, F):	4.486
Uncertainty (Calculated):	0.220
Result (pCi/L, g, F):	3.693
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.858
Numerical Performance Indicator:	-1.75
Percent Recovery:	82.33%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limits:	135%
Lower % Recovery Limits:	60%

Duplicate Sample Assessment	
Sample ID:	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample ID:	
Duplicate Result (pCi/L, g, F):	
Sample Result 2 Sigma CSU (pCi/L, g, F):	
Sample Duplicate Result (pCi/L, g, F):	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	
Are sample and/or duplicate results below RL?	
Duplicate Numerical Performance Indicator:	
Duplicate RPD:	
Duplicate Status vs Numerical Indicator:	
Duplicate Status vs RPD:	
% RPD Limit:	

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

✓AL
5/7/24

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: LL1
Date: 4/25/2024
Batch ID: 78827
Matrix: DW

Method Blank Assessment	
MB Sample ID	3234244
MB concentration:	0.309
MB Counting Uncertainty:	0.229
MB MDC:	0.120
MB Numerical Performance Indicator:	2.65
MB Status vs. Numerical Indicator:	N/A
MB Status vs. MDC:	#N/A

Laboratory Control Sample Assessment	
LCSID (Y or N)?	N
LCS78827	LCS078827
Count Date:	5/10/2024
Spike I.D.:	23-063
Spike Concentration (pCi/mL):	32.300
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.657
Target Conc. (pCi/L, g, F):	4.913
Uncertainty (Calculated):	0.231
Result (pCi/L, g, F):	5.039
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.040
Numerical Performance Indicator:	0.23
Percent Recovery:	102.57%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limits:	133%
Lower % Recovery Limits:	73%

Duplicate Sample Assessment	
Sample I.D.:	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.:	
Sample Result (pCi/L, g, F):	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Duplicate Result (pCi/L, g, F):	
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	
Are sample and/or duplicate results below RL?	See Below ##
Duplicate Numerical Performance Indicator:	
Duplicate RPD:	
Duplicate Status vs Numerical Indicator:	
Duplicate Status vs RPD:	
% RPD Limit:	

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the RL.

Comments:

#N/A

Cum 5/11/24

MS 5/13/24

Sample Matrix Spike Control Assessment	
Sample Collection Date:	4/17/2024
Sample I.D.:	30678403006
Sample MS I.D.:	30678403007
Sample MSD I.D.:	30678403008
Spike I.D.:	23-063
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	32.301
Spike Volume Used in MS (mL):	0.20
Spike Volume Used in MSD (mL):	0.20
MS Aliquot (L, g, F):	0.653
MS Target Conc. (pCi/L, g, F):	9.898
MSD Aliquot (L, g, F):	0.657
MSD Target Conc. (pCi/L, g, F):	9.834
MS Spike Uncertainty (calculated):	0.465
MSD Spike Uncertainty (calculated):	0.462
Sample Result Counting Uncertainty (pCi/L, g, F):	-0.153
Sample Matrix Spike Result:	0.591
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	10.584
Sample Matrix Spike Duplicate Result:	1.464
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	12.096
MS Numerical Performance Indicator:	1.623
MSD Numerical Performance Indicator:	0.989
MS Percent Recovery:	108.47%
MSD Percent Recovery:	124.55%
MS Status vs Numerical Indicator:	N/A
MSD Status vs Numerical Indicator:	N/A
MS Status vs Recovery:	Pass
MSD Status vs Recovery:	Pass
MS/MSD Upper % Recovery Limits:	136%
MS/MSD Lower % Recovery Limits:	71%

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	30678403006
Sample MS I.D.:	30678403007
Sample MSD I.D.:	30678403008
Spike I.D.:	10.584
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	1.464
Sample Matrix Spike Duplicate Result:	12.096
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	1.623
Duplicate Numerical Performance Indicator:	-1.356
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	13.80%
MS/MSD Duplicate Status vs Numerical Indicator:	N/A
MS/MSD Duplicate Status vs RPD:	Pass
% RPD Limit:	32%



Certificate of Analysis 4101343

Dawn Storckman
Big Rivers Electric Corporation Wilson Station
PO Box 24
Henderson, KY 42419

Customer ID: 44-100168
Report Printed: 10/28/2024 15:48

Project Name: Wilson Groundwater Wells 092-00004

Workorder: 4101343

Dear Dawn Storckman

Enclosed are the analytical results for samples received by the laboratory 10/01/2024 14:00.

The results relate to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services LLC Kentucky - Madisonville

If you have any questions concerning this report, please feel free to contact me.



#460210 Madisonville, KY
#460291 Pikeville, KY
#E871136 Englewood, OH

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Rob Whittington, Project Manager



SAMPLE SUMMARY

Lab ID	Client Sample ID/Alias	Matrix	Date Collected	Date Received	Sampled By
4101343-09	MW4D/	Groundwater	10/01/2024 10:55	10/01/2024 14:00	Travis Sneed
4101343-10	Mercury Field Blank MW-4D/	Water	10/01/2024 10:55	10/01/2024 14:00	Travis Sneed
4101343-11	MW5/	Groundwater	10/01/2024 08:05	10/01/2024 14:00	Travis Sneed
4101343-12	Mercury Field Blank MW-5/	Water	10/01/2024 08:05	10/01/2024 14:00	Travis Sneed
4101343-13	MW6/	Groundwater	09/30/2024 14:55	10/01/2024 14:00	Travis Sneed
4101343-14	Mercury Field Blank MW-6/	Water	09/30/2024 14:55	10/01/2024 14:00	Travis Sneed
4101343-15	MW7/	Groundwater	10/01/2024 08:00	10/01/2024 14:00	Travis Sneed
4101343-16	Mercury Field Blank MW-7/	Water	10/01/2024 08:00	10/01/2024 14:00	Travis Sneed
4101343-17	MW8/	Groundwater	09/30/2024 13:27	10/01/2024 14:00	Travis Sneed
4101343-18	Mercury Field Blank MW-8/	Water	09/30/2024 13:27	10/01/2024 14:00	Travis Sneed
4101343-19	MW10/	Groundwater	09/30/2024 15:25	10/01/2024 14:00	Travis Sneed
4101343-20	Mercury Field Blank MW-10/	Water	09/30/2024 15:25	10/01/2024 14:00	Travis Sneed
4101343-21	MW-10D/	Groundwater	10/02/2024 07:40	10/01/2024 14:00	Travis Sneed
4101343-22	Mercury Field Blank MW-10D/	Water	10/02/2024 07:00	10/01/2024 14:00	Travis Sneed
4101343-23	MW102/	Groundwater	09/30/2024 11:00	10/01/2024 14:00	Travis Sneed
4101343-24	Mercury Field Blank MW-102/	Water	09/30/2024 11:00	10/01/2024 14:00	Travis Sneed
4101343-25	MW104/	Groundwater	09/30/2024 09:10	10/01/2024 14:00	Travis Sneed
4101343-26	Mercury Field Blank MW-104/	Water	09/30/2024 09:10	10/01/2024 14:00	Travis Sneed
4101343-27	MW-105R/	Groundwater	09/30/2024 07:08	10/01/2024 14:00	Travis Sneed
4101343-28	Mercury Field Blank MW-105R/	Water	09/30/2024 07:08	10/01/2024 14:00	Travis Sneed
4101343-29	MW110/	Groundwater	09/30/2024 07:30	10/01/2024 14:00	Travis Sneed
4101343-30	Mercury Field Blank MW-110/	Water	09/30/2024 07:30	10/01/2024 14:00	Travis Sneed
4101343-31	MW-111/	Groundwater	09/30/2024 10:35	10/01/2024 14:00	Travis Sneed
4101343-32	Mercury Field Blank MW-111/	Water	09/30/2024 10:35	10/01/2024 14:00	Travis Sneed
4101343-33	MW-112/	Groundwater	10/02/2024 07:10	10/01/2024 14:00	Travis Sneed
4101343-34	Mercury Field Blank MW-112/	Water	10/02/2024 07:10	10/01/2024 14:00	Travis Sneed
4101343-35	MW-113/	Groundwater	09/30/2024 07:35	10/01/2024 14:00	Travis Sneed
4101343-36	Mercury Field Blank MW-113/	Water	09/30/2024 07:35	10/01/2024 14:00	Travis Sneed



Pace Analytical Services, LLC

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Madisonville, KY 42431

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SAMPLE SUMMARY

Lab ID	Client Sample ID/Alias	Matrix	Date Collected	Date Received	Sampled By
4101343-37	MW-114/	Groundwater	09/30/2024 09:55	10/01/2024 14:00	Travis Sneed
4101343-38	Mercury Field Blank MW-114/	Water	09/30/2024 09:55	10/01/2024 14:00	Travis Sneed
4101343-39	Well Duplicate 1/	Groundwater	09/30/2024 08:10	10/01/2024 14:00	Travis Sneed
4101343-40	Mercury Field Blank Well Dup-1/	Water	09/30/2024 08:10	10/01/2024 14:00	Travis Sneed
4101343-41	Well Duplicate 2/	Groundwater	10/01/2024 10:57	10/01/2024 14:00	Travis Sneed
4101343-42	Mercury Field Blank Well Dup-2/	Water	10/01/2024 10:57	10/01/2024 14:00	Travis Sneed
4101343-43	Field Blank/	Water	10/01/2024 08:50	10/01/2024 14:00	Travis Sneed
4101343-44	Mercury Field Blank/	Water	10/01/2024 08:50	10/01/2024 14:00	Travis Sneed



<u>LabNumber</u>	<u>Measurement</u>	<u>Value</u>
4101343-09	Field Conductance	5.08
	Field pH	6.36
	Field Temp (C)	19.44
4101343-11	Field Conductance	4.32
	Field Dissolved Oxygen	0.04
	Field pH	6.32
	Field Temp (C)	18.17
4101343-13	Field Turbidity	20.2
	Field Conductance	3.15
	Field pH	6.56
4101343-15	Field Temp (C)	19.77
	Field Conductance	2.67
	Field pH	6.48
4101343-17	Field Temp (C)	18.67
	Field Conductance	1.79
	Field pH	6.66
4101343-19	Field Temp (C)	19.52
	Field Conductance	2.50
	Field pH	5.92
4101343-21	Field Temp (C)	21.98
	Field Conductance	3.45
	Field pH	6.22
4101343-23	Field Conductance	1.21
	Field pH	6.96
	Field Temp (C)	18.38
4101343-25	Field Conductance	2.18
	Field pH	6.88
	Field Temp (C)	19.02
4101343-27	Field Conductance	1.31
	Field pH	6.98
	Field Temp (C)	19.38
4101343-29	Field Conductance	0.490
	Field Dissolved Oxygen	0.15
	Field pH	6.73
	Field Temp (C)	19.02
4101343-31	Field Turbidity	66.1
	Field Conductance	2.44
	Field pH	6.39
4101343-33	Field Temp (C)	18.99
	Field Conductance	1.02
	Field pH	6.70
4101343-35	Field Temp (C)	17.50
	Field Conductance	1.48
	Field pH	6.52
4101343-37	Field Temp (C)	17.71
	Field Conductance	0.980
	Field Dissolved Oxygen	0.05
4101343-39	Field pH	7.01
	Field Temp (C)	19.28
	Field Turbidity	30.2
	Field Conductance	0.490
4101343-41	Field Dissolved Oxygen	0.15
	Field pH	6.73
	Field Temp (C)	19.02
	Field Turbidity	66.1
4101343-41	Field Conductance	1.80
	Field Dissolved Oxygen	0.18



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4101343-41	Field pH	6.56
	Field Temp (C)	20.52
	Field Turbidity	64.1



ANALYTICAL RESULTS

Lab Sample ID: **4101343-09**Description: **MW4D**

Sample Collection Date Time: 10/01/2024 10:55

Sample Received Date Time: 10/01/2024 14:00

Metals by SW846 6000 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Antimony	ND	u	mg/L	0.005	0.002	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:13	MRWD
Arsenic	0.0044		mg/L	0.0010	0.0004	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:13	MRWD
Barium	0.020		mg/L	0.004	0.001	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:13	MRWD
Beryllium	ND	u	mg/L	0.0020	0.0010	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:13	MRWD
Boron	8.05	D1	mg/L	1.00	1.00	SW846 6010 B	10/03/2024 08:42	10/14/2024 15:43	AIS
Cadmium	ND	u	mg/L	0.0010	0.0001	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:13	MRWD
Calcium	644	D1	mg/L	50.0	25.0	SW846 6010 B	10/03/2024 08:42	10/14/2024 15:46	AIS
Chromium	0.0013	J	mg/L	0.0020	0.0006	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:13	MRWD
Cobalt	0.035		mg/L	0.004	0.004	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:13	MRWD
Copper	0.002	J	mg/L	0.003	0.001	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:13	MRWD
Iron	33.3	D1	mg/L	1.00	0.500	SW846 6010 B	10/03/2024 08:42	10/11/2024 22:30	AIS
Lead	0.0009	J	mg/L	0.002	0.0005	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:13	MRWD
Lithium	0.16		mg/L	0.02	0.005	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:13	MRWD
Magnesium	247	D1	mg/L	20.0	9.00	SW846 6010 B	10/03/2024 08:42	10/14/2024 15:46	AIS
Molybdenum	0.01		mg/L	0.01	0.002	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:13	MRWD
Nickel	0.064		mg/L	0.003	0.001	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:13	MRWD
Potassium	37.7	D1	mg/L	5.00	2.20	SW846 6010 B	10/03/2024 08:42	10/14/2024 15:43	AIS
Selenium	0.001	J	mg/L	0.003	0.001	SW846-6020 A	10/03/2024 08:42	10/16/2024 11:59	MRWD
Sodium	214	D1	mg/L	26.0	10.0	SW846 6010 B	10/03/2024 08:42	10/14/2024 15:46	AIS
Thallium	0.0001	J	mg/L	0.0020	0.0001	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:13	MRWD
Zinc	0.06		mg/L	0.02	0.004	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:13	MRWD

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	15.4		ng/L	5.0	1.8	EPA 245.7 REV 2	10/04/2024 08:33	10/04/2024 12:21	TML

Conventional Chemistry Analyses Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Bicarbonate Alkalinity as CaCO ₃	316		mg/L	4	4	2320 B-2011	10/04/2024 12:11	10/04/2024 12:11	DJK
Carbonate Alkalinity as CaCO ₃	ND	u	mg/L	4		2320 B-2011	10/04/2024 12:11	10/04/2024 12:11	DJK
Total Alkalinity	316		mg/L	4	4	2320 B-2011	10/04/2024 12:11	10/04/2024 12:11	DJK
Chemical Oxygen Demand	47		mg/L	13	8	HACH 8000	10/08/2024 09:30	10/08/2024 16:43	ORK
Specific Conductance (Lab)	4640		uS/cm @ 25.0 °C	1	1	2510 B-2011	10/04/2024 11:24	10/04/2024 11:49	JEP
Total Dissolved Solids	3890		mg/L	50	50	2540 C-2015	10/04/2024 17:11	10/04/2024 17:11	HAG
Total Organic Carbon	0.7		mg/L	0.5	0.2	5310 C-2014	10/03/2024 10:30	10/04/2024 06:20	HMF

Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	0.541	_Sub	pCi/L			EPA 903.1	10/21/2024 16:15	10/21/2024 16:19	RCW

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Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	1.01	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW
Radium	1.55	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW
See Attached Subcontract Report	1.55	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW

Ion Chromatography Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Chloride	479	D	mg/L	25.0	18.0	EPA 300.0 REV 2.1	10/08/2024 19:58	10/08/2024 19:58	CLS3
Fluoride	0.25		mg/L	0.20	0.18	EPA 300.0 REV 2.1	10/08/2024 19:32	10/08/2024 19:32	CLS3
Sulfate	1790	D	mg/L	50.0	50.0	EPA 300.0 REV 2.1	10/08/2024 19:58	10/08/2024 19:58	CLS3

Manual Calculation

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Hardness Calculation as CaCO₃	2620	D	mg/L	207	99.5	2340 B-1997	10/03/2024 08:42	10/14/2024 15:46	AIS



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ANALYTICAL RESULTS

Lab Sample ID: 4101343-10
Description: Mercury Field Blank MW-4D

Sample Collection Date Time: 10/01/2024 10:55
Sample Received Date Time: 10/01/2024 14:00

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	u	ng/L	5.0	1.8	EPA 245.7 REV 2	10/04/2024 08:33	10/04/2024 12:55	TML



ANALYTICAL RESULTS

Lab Sample ID: **4101343-11**Description: **MW5**

Sample Collection Date Time: 10/01/2024 08:05

Sample Received Date Time: 10/01/2024 14:00

Metals by SW846 6000 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Antimony	ND	u	mg/L	0.005	0.002	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:17	MRWD
Arsenic	0.0026		mg/L	0.0010	0.0004	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:17	MRWD
Barium	0.010		mg/L	0.004	0.001	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:17	MRWD
Beryllium	ND	u	mg/L	0.0020	0.0010	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:17	MRWD
Boron	0.88		mg/L	0.10	0.10	SW846 6010 B	10/03/2024 08:42	10/21/2024 13:53	AIS
Cadmium	ND	u	mg/L	0.0010	0.0001	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:17	MRWD
Calcium	620	D1	mg/L	50.0	25.0	SW846 6010 B	10/03/2024 08:42	10/14/2024 15:52	AIS
Chromium	ND	u	mg/L	0.0020	0.0006	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:17	MRWD
Cobalt	0.005		mg/L	0.004	0.004	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:17	MRWD
Copper	ND	u	mg/L	0.003	0.001	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:17	MRWD
Iron	8.06	D1	mg/L	1.00	0.500	SW846 6010 B	10/03/2024 08:42	10/11/2024 22:34	AIS
Lead	ND	u	mg/L	0.002	0.0005	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:17	MRWD
Lithium	0.04		mg/L	0.02	0.005	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:17	MRWD
Magnesium	290	D1	mg/L	20.0	9.00	SW846 6010 B	10/03/2024 08:42	10/14/2024 15:52	AIS
Molybdenum	0.005	J	mg/L	0.01	0.002	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:17	MRWD
Nickel	0.004		mg/L	0.003	0.001	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:17	MRWD
Potassium	8.31	D1	mg/L	5.00	2.20	SW846 6010 B	10/03/2024 08:42	10/15/2024 12:57	AIS
Selenium	ND	u	mg/L	0.003	0.001	SW846-6020 A	10/03/2024 08:42	10/16/2024 12:01	MRWD
Sodium	94.9	D1	mg/L	2.60	1.00	SW846 6010 B	10/03/2024 08:42	10/14/2024 15:49	AIS
Thallium	ND	u	mg/L	0.0020	0.0001	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:17	MRWD
Zinc	ND	u	mg/L	0.02	0.004	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:17	MRWD

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	u	ng/L	5.0	1.8	EPA 245.7 REV 2	10/04/2024 08:33	10/04/2024 12:27	TML

Conventional Chemistry Analyses Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Bicarbonate Alkalinity as CaCO ₃	486		mg/L	4	4	2320 B-2011	10/04/2024 12:16	10/04/2024 12:16	DJK
Carbonate Alkalinity as CaCO ₃	ND	u	mg/L	4		2320 B-2011	10/04/2024 12:16	10/04/2024 12:16	DJK
Total Alkalinity	486		mg/L	4	4	2320 B-2011	10/04/2024 12:16	10/04/2024 12:16	DJK
Chemical Oxygen Demand	26		mg/L	13	8	HACH 8000	10/08/2024 09:30	10/08/2024 16:43	ORK
Specific Conductance (Lab)	4150		uS/cm @ 25.0 °C	1	1	2510 B-2011	10/04/2024 11:24	10/04/2024 11:49	JEP
Total Dissolved Solids	3000		mg/L	250	250	2540 C-2015	10/04/2024 17:11	10/04/2024 17:11	HAG
Total Organic Carbon	1.7		mg/L	0.5	0.2	5310 C-2014	10/03/2024 10:30	10/04/2024 06:41	HMF

Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	-0.228	_Sub	pCi/L			EPA 903.1	10/21/2024 16:15	10/21/2024 16:19	RCW

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Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	1.79	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW
Radium	1.79	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW
See Attached Subcontract Report	1.79	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW

Ion Chromatography Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Chloride	275	D	mg/L	25.0	18.0	EPA 300.0 REV 2.1	10/08/2024 20:49	10/08/2024 20:49	CLS3
Fluoride	ND	u	mg/L	0.20		EPA 300.0 REV 2.1	10/08/2024 20:23	10/08/2024 20:23	CLS3
Sulfate	1790	D	mg/L	50.0	50.0	EPA 300.0 REV 2.1	10/08/2024 20:49	10/08/2024 20:49	CLS3

Manual Calculation

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Hardness Calculation as CaCO₃	2740	D	mg/L	207	99.5	2340 B-1997	10/03/2024 08:42	10/14/2024 15:52	AIS



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ANALYTICAL RESULTS

Lab Sample ID: 4101343-12
Description: Mercury Field Blank MW-5

Sample Collection Date Time: 10/01/2024 08:05
Sample Received Date Time: 10/01/2024 14:00

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	v1, u	ng/L	5.0	1.8	EPA 245.7 REV 2	10/04/2024 08:33	10/04/2024 13:12	TML



ANALYTICAL RESULTS

Lab Sample ID: 4101343-13

Description: MW6

Sample Collection Date Time: 09/30/2024 14:55

Sample Received Date Time: 10/01/2024 14:00

Metals by SW846 6000 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Antimony	ND	u	mg/L	0.005	0.002	SW846-6020 A	10/03/2024 11:20	10/14/2024 14:03	MRWD
Arsenic	0.0049		mg/L	0.0010	0.0004	SW846-6020 A	10/03/2024 11:20	10/14/2024 14:03	MRWD
Barium	0.011		mg/L	0.004	0.001	SW846-6020 A	10/03/2024 11:20	10/14/2024 14:03	MRWD
Beryllium	ND	u	mg/L	0.0020	0.0010	SW846-6020 A	10/03/2024 11:20	10/14/2024 14:03	MRWD
Boron	1.00	D1, M2	mg/L	1.00	1.00	SW846 6010 B	10/03/2024 11:20	10/14/2024 13:07	AIS
Cadmium	ND	u	mg/L	0.0010	0.0001	SW846-6020 A	10/03/2024 11:20	10/14/2024 14:03	MRWD
Calcium	475	D1, M3	mg/L	50.0	25.0	SW846 6010 B	10/03/2024 11:20	10/14/2024 13:10	AIS
Chromium	ND	u	mg/L	0.0020	0.0006	SW846-6020 A	10/03/2024 11:20	10/14/2024 14:03	MRWD
Cobalt	0.007		mg/L	0.004	0.004	SW846-6020 A	10/03/2024 11:20	10/14/2024 14:03	MRWD
Copper	ND	u	mg/L	0.003	0.001	SW846-6020 A	10/03/2024 11:20	10/14/2024 14:03	MRWD
Iron	5.95	D1	mg/L	1.00	0.500	SW846 6010 B	10/03/2024 11:20	10/12/2024 01:35	AIS
Lead	ND	u	mg/L	0.002	0.0005	SW846-6020 A	10/03/2024 11:20	10/14/2024 14:03	MRWD
Lithium	0.04		mg/L	0.02	0.005	SW846-6020 A	10/03/2024 11:20	10/14/2024 14:03	MRWD
Magnesium	222	D1, M3	mg/L	20.0	9.00	SW846 6010 B	10/03/2024 11:20	10/14/2024 13:10	AIS
Molybdenum	0.007	J	mg/L	0.01	0.002	SW846-6020 A	10/03/2024 11:20	10/14/2024 14:03	MRWD
Nickel	0.013		mg/L	0.003	0.001	SW846-6020 A	10/03/2024 11:20	10/14/2024 14:03	MRWD
Potassium	7.71	D1	mg/L	5.00	2.20	SW846 6010 B	10/03/2024 11:20	10/12/2024 01:35	AIS
Selenium	ND	u	mg/L	0.003	0.001	SW846-6020 A	10/03/2024 11:20	10/15/2024 13:01	MRWD
Sodium	35.9	D1, M1	mg/L	2.60	1.00	SW846 6010 B	10/03/2024 11:20	10/12/2024 01:35	AIS
Thallium	ND	u	mg/L	0.0020	0.0001	SW846-6020 A	10/03/2024 11:20	10/14/2024 14:03	MRWD
Zinc	0.009	V1, J	mg/L	0.02	0.004	SW846-6020 A	10/03/2024 11:20	10/14/2024 14:03	MRWD

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	M2, u	ng/L	5.0	1.8	EPA 245.7 REV 2	10/04/2024 08:33	10/04/2024 12:33	TML

Conventional Chemistry Analyses Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Bicarbonate Alkalinity as CaCO3	505		mg/L	4	4	2320 B-2011	10/04/2024 12:24	10/04/2024 12:24	DJK
Carbonate Alkalinity as CaCO3	ND	u	mg/L	4		2320 B-2011	10/04/2024 12:24	10/04/2024 12:24	DJK
Total Alkalinity	505	M3	mg/L	4	4	2320 B-2011	10/04/2024 12:24	10/04/2024 12:24	DJK
Chemical Oxygen Demand	9	J	mg/L	13	8	HACH 8000	10/08/2024 09:30	10/08/2024 16:43	ORK
Specific Conductance (Lab)	3140		uS/cm @ 25.0 °C	1	1	2510 B-2011	10/04/2024 11:24	10/04/2024 11:49	JEP
Total Dissolved Solids	2640		mg/L	250	250	2540 C-2015	10/04/2024 17:11	10/04/2024 17:11	HAG
Total Organic Carbon	1.8		mg/L	0.5	0.2	5310 C-2014	10/03/2024 10:30	10/04/2024 07:02	HMF

Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
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Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	0.110	_Sub	pCi/L			EPA 903.1	10/21/2024 16:15	10/21/2024 16:19	RCW
See Attached Subcontract Report	0.743	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW
Radium	0.853	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW
See Attached Subcontract Report	0.853	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW

Ion Chromatography Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Chloride	46.3		mg/L	0.5	0.4	EPA 300.0 REV 2.1	10/08/2024 22:05	10/08/2024 22:05	CLS3
Fluoride	0.21		mg/L	0.20	0.18	EPA 300.0 REV 2.1	10/08/2024 22:05	10/08/2024 22:05	CLS3
Sulfate	1500	D	mg/L	50.0	50.0	EPA 300.0 REV 2.1	10/08/2024 22:30	10/08/2024 22:30	CLS3

Manual Calculation

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Hardness Calculation as CaCO3	2100	D	mg/L	207	99.5	2340 B-1997	10/03/2024 11:20	10/14/2024 13:10	AIS



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ANALYTICAL RESULTS

Lab Sample ID: 4101343-14
Description: Mercury Field Blank MW-6

Sample Collection Date Time: 09/30/2024 14:55
Sample Received Date Time: 10/01/2024 14:00

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	v1, u	ng/L	5.0	1.8	EPA 245.7 REV 2	10/04/2024 08:33	10/04/2024 13:23	TML



ANALYTICAL RESULTS

Lab Sample ID: **4101343-15**Description: **MW7**

Sample Collection Date Time: 10/01/2024 08:00

Sample Received Date Time: 10/01/2024 14:00

Metals by SW846 6000 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Antimony	ND	u	mg/L	0.005	0.002	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:21	MRWD
Arsenic	0.0040		mg/L	0.0010	0.0004	SW846-6020 A	10/03/2024 08:42	10/14/2024 12:58	MRWD
Barium	0.012		mg/L	0.004	0.001	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:21	MRWD
Beryllium	ND	u	mg/L	0.0020	0.0010	SW846-6020 A	10/03/2024 08:42	10/14/2024 12:58	MRWD
Boron	3.33	D1	mg/L	1.00	1.00	SW846 6010 B	10/03/2024 08:42	10/14/2024 16:05	AIS
Cadmium	ND	u	mg/L	0.0010	0.0001	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:21	MRWD
Calcium	405	D1	mg/L	50.0	25.0	SW846 6010 B	10/03/2024 08:42	10/14/2024 16:08	AIS
Chromium	ND	u	mg/L	0.0020	0.0006	SW846-6020 A	10/03/2024 08:42	10/14/2024 12:58	MRWD
Cobalt	ND	u	mg/L	0.004	0.004	SW846-6020 A	10/03/2024 08:42	10/14/2024 12:58	MRWD
Copper	ND	u	mg/L	0.003	0.001	SW846-6020 A	10/03/2024 08:42	10/14/2024 12:58	MRWD
Iron	5.09	D1	mg/L	1.00	0.500	SW846 6010 B	10/03/2024 08:42	10/11/2024 22:37	AIS
Lead	ND	u	mg/L	0.002	0.0005	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:21	MRWD
Lithium	0.03		mg/L	0.02	0.005	SW846-6020 A	10/03/2024 08:42	10/14/2024 12:58	MRWD
Magnesium	151	D1	mg/L	20.0	9.00	SW846 6010 B	10/03/2024 08:42	10/15/2024 13:05	AIS
Molybdenum	0.005	J	mg/L	0.01	0.002	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:21	MRWD
Nickel	0.002	J	mg/L	0.003	0.001	SW846-6020 A	10/03/2024 08:42	10/14/2024 12:58	MRWD
Potassium	5.81	D1	mg/L	5.00	2.20	SW846 6010 B	10/03/2024 08:42	10/15/2024 13:01	AIS
Selenium	ND	u	mg/L	0.003	0.001	SW846-6020 A	10/03/2024 08:42	10/14/2024 12:58	MRWD
Sodium	42.1	D1	mg/L	2.60	1.00	SW846 6010 B	10/03/2024 08:42	10/11/2024 22:37	AIS
Thallium	ND	u	mg/L	0.0020	0.0001	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:21	MRWD
Zinc	0.005	J	mg/L	0.02	0.004	SW846-6020 A	10/03/2024 08:42	10/14/2024 12:58	MRWD

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	u	ng/L	5.0	1.8	EPA 245.7 REV 2	10/04/2024 08:33	10/04/2024 12:38	TML

Conventional Chemistry Analyses Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Bicarbonate Alkalinity as CaCO3	327		mg/L	4	4	2320 B-2011	10/04/2024 12:31	10/04/2024 12:31	DJK
Carbonate Alkalinity as CaCO3	ND	u	mg/L	4		2320 B-2011	10/04/2024 12:31	10/04/2024 12:31	DJK
Total Alkalinity	327		mg/L	4	4	2320 B-2011	10/04/2024 12:31	10/04/2024 12:31	DJK
Chemical Oxygen Demand	11	J	mg/L	13	8	HACH 8000	10/08/2024 09:30	10/08/2024 16:43	ORK
Specific Conductance (Lab)	2600		uS/cm @ 25.0 °C	1	1	2510 B-2011	10/04/2024 11:24	10/04/2024 11:49	JEP
Total Dissolved Solids	2260		mg/L	100	100	2540 C-2015	10/04/2024 17:11	10/04/2024 17:11	HAG
Total Organic Carbon	1.4		mg/L	0.5	0.2	5310 C-2014	10/03/2024 10:30	10/04/2024 07:23	HMF

Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	-0.112	_Sub	pCi/L			EPA 903.1	10/21/2024 16:15	10/21/2024 16:19	RCW



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Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	0.570	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW
Radium	0.570	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW
See Attached Subcontract Report	0.570	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW

Ion Chromatography Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Chloride	104		mg/L	0.5	0.4	EPA 300.0 REV 2.1	10/08/2024 22:56	10/08/2024 22:56	CLS3
Fluoride	0.25		mg/L	0.20	0.18	EPA 300.0 REV 2.1	10/08/2024 22:56	10/08/2024 22:56	CLS3
Sulfate	1070	D	mg/L	50.0	50.0	EPA 300.0 REV 2.1	10/08/2024 23:21	10/08/2024 23:21	CLS3

Manual Calculation

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Hardness Calculation as CaCO₃	1630	D	mg/L	207	99.5	2340 B-1997	10/03/2024 08:42	10/15/2024 13:05	AIS



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ANALYTICAL RESULTS

Lab Sample ID: 4101343-16
Description: Mercury Field Blank MW-7

Sample Collection Date Time: 10/01/2024 08:00
Sample Received Date Time: 10/01/2024 14:00

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	v1, u	ng/L	5.0	1.8	EPA 245.7 REV 2	10/04/2024 08:33	10/04/2024 13:35	TML



ANALYTICAL RESULTS

Lab Sample ID: 4101343-17

Description: MW8

Sample Collection Date Time: 09/30/2024 13:27

Sample Received Date Time: 10/01/2024 14:00

Metals by SW846 6000 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Antimony	ND	u	mg/L	0.005	0.002	SW846-6020 A	10/03/2024 08:42	10/14/2024 13:01	MRWD
Arsenic	0.0060		mg/L	0.0010	0.0004	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:24	MRWD
Barium	0.022		mg/L	0.004	0.001	SW846-6020 A	10/03/2024 08:42	10/14/2024 13:01	MRWD
Beryllium	ND	u	mg/L	0.0020	0.0010	SW846-6020 A	10/03/2024 08:42	10/14/2024 13:01	MRWD
Boron	ND	u	mg/L	0.10	0.10	SW846 6010 B	10/03/2024 08:42	10/21/2024 13:56	AIS
Cadmium	ND	u	mg/L	0.0010	0.0001	SW846-6020 A	10/03/2024 08:42	10/14/2024 13:01	MRWD
Calcium	220	D1	mg/L	50.0	25.0	SW846 6010 B	10/03/2024 08:42	10/14/2024 16:17	AIS
Chromium	0.0031		mg/L	0.0020	0.0006	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:24	MRWD
Cobalt	ND	u	mg/L	0.004	0.004	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:24	MRWD
Copper	0.003		mg/L	0.003	0.001	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:24	MRWD
Iron	21.2	D1	mg/L	1.00	0.500	SW846 6010 B	10/03/2024 08:42	10/11/2024 22:40	AIS
Lead	0.001	J	mg/L	0.002	0.0005	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:24	MRWD
Lithium	0.009	J	mg/L	0.02	0.005	SW846-6020 A	10/03/2024 08:42	10/14/2024 13:01	MRWD
Magnesium	119	D1	mg/L	20.0	9.00	SW846 6010 B	10/03/2024 08:42	10/15/2024 13:11	AIS
Molybdenum	0.01		mg/L	0.01	0.002	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:24	MRWD
Nickel	0.007		mg/L	0.003	0.001	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:24	MRWD
Potassium	3.70	D2	mg/L	5.00	2.20	SW846 6010 B	10/03/2024 08:42	10/14/2024 16:14	AIS
Selenium	ND	u	mg/L	0.003	0.001	SW846-6020 A	10/03/2024 08:42	10/14/2024 13:01	MRWD
Sodium	32.7	D1	mg/L	2.60	1.00	SW846 6010 B	10/03/2024 08:42	10/11/2024 22:40	AIS
Thallium	ND	u	mg/L	0.0020	0.0001	SW846-6020 A	10/03/2024 08:42	10/14/2024 13:01	MRWD
Zinc	0.01	J	mg/L	0.02	0.004	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:24	MRWD

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	3.8	J	ng/L	5.0	1.8	EPA 245.7 REV 2	10/04/2024 08:33	10/04/2024 12:44	TML

Conventional Chemistry Analyses Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Bicarbonate Alkalinity as CaCO3	288		mg/L	4	4	2320 B-2011	10/04/2024 12:37	10/04/2024 12:37	DJK
Carbonate Alkalinity as CaCO3	ND	u	mg/L	4		2320 B-2011	10/04/2024 12:37	10/04/2024 12:37	DJK
Total Alkalinity	288		mg/L	4	4	2320 B-2011	10/04/2024 12:37	10/04/2024 12:37	DJK
Chemical Oxygen Demand	20		mg/L	13	8	HACH 8000	10/08/2024 09:30	10/08/2024 16:43	ORK
Specific Conductance (Lab)	1730		uS/cm @ 25.0 °C	1	1	2510 B-2011	10/04/2024 11:24	10/04/2024 11:49	JEP
Total Dissolved Solids	1440		mg/L	250	250	2540 C-2015	10/04/2024 17:55	10/04/2024 17:55	HAG
Total Organic Carbon	3.0		mg/L	0.5	0.2	5310 C-2014	10/03/2024 10:30	10/04/2024 07:45	HMF

Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	0.107	_Sub	pCi/L			EPA 903.1	10/21/2024 16:15	10/21/2024 16:19	RCW

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Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	0.193	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW
See Attached Subcontract Report	0.300	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW
Radium	0.300	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW

Ion Chromatography Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Chloride	4.0		mg/L	0.5	0.4	EPA 300.0 REV 2.1	10/08/2024 23:47	10/08/2024 23:47	CLS3
Fluoride	0.27		mg/L	0.20	0.18	EPA 300.0 REV 2.1	10/08/2024 23:47	10/08/2024 23:47	CLS3
Sulfate	711	D	mg/L	50.0	50.0	EPA 300.0 REV 2.1	10/09/2024 00:12	10/09/2024 00:12	CLS3

Manual Calculation

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Hardness Calculation as CaCO ₃	1040	D	mg/L	207	99.5	2340 B-1997	10/03/2024 08:42	10/15/2024 13:11	AIS



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ANALYTICAL RESULTS

Lab Sample ID: 4101343-18
Description: Mercury Field Blank MW-8

Sample Collection Date Time: 09/30/2024 13:27
Sample Received Date Time: 10/01/2024 14:00

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	v1, u	ng/L	5.0	1.8	EPA 245.7 REV 2	10/04/2024 08:33	10/04/2024 13:46	TML



ANALYTICAL RESULTS

Lab Sample ID: **4101343-19**Description: **MW10**

Sample Collection Date Time: 09/30/2024 15:25

Sample Received Date Time: 10/01/2024 14:00

Metals by SW846 6000 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Antimony	ND	u	mg/L	0.005	0.002	SW846-6020 A	10/03/2024 08:42	10/14/2024 13:03	MRWD
Arsenic	0.0025		mg/L	0.0010	0.0004	SW846-6020 A	10/03/2024 08:42	10/14/2024 13:03	MRWD
Barium	0.009		mg/L	0.004	0.001	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:46	MRWD
Beryllium	ND	u	mg/L	0.0020	0.0010	SW846-6020 A	10/03/2024 08:42	10/14/2024 13:03	MRWD
Boron	0.46		mg/L	0.10	0.10	SW846 6010 B	10/03/2024 08:42	10/21/2024 14:00	AIS
Cadmium	0.0001	J	mg/L	0.0010	0.0001	SW846-6020 A	10/03/2024 08:42	10/14/2024 13:03	MRWD
Calcium	437	D1	mg/L	50.0	25.0	SW846 6010 B	10/03/2024 08:42	10/14/2024 16:24	AIS
Chromium	0.0006	J	mg/L	0.0020	0.0006	SW846-6020 A	10/03/2024 08:42	10/14/2024 13:03	MRWD
Cobalt	0.082		mg/L	0.004	0.004	SW846-6020 A	10/03/2024 08:42	10/14/2024 13:03	MRWD
Copper	ND	u	mg/L	0.003	0.001	SW846-6020 A	10/03/2024 08:42	10/14/2024 13:03	MRWD
Iron	22.5	D1	mg/L	1.00	0.500	SW846 6010 B	10/03/2024 08:42	10/11/2024 22:43	AIS
Lead	ND	u	mg/L	0.002	0.0005	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:46	MRWD
Lithium	0.007	J	mg/L	0.02	0.005	SW846-6020 A	10/03/2024 08:42	10/14/2024 13:03	MRWD
Magnesium	258	D1	mg/L	20.0	9.00	SW846 6010 B	10/03/2024 08:42	10/15/2024 13:14	AIS
Molybdenum	ND	u	mg/L	0.01	0.002	SW846-6020 A	10/03/2024 08:42	10/14/2024 13:03	MRWD
Nickel	0.034		mg/L	0.003	0.001	SW846-6020 A	10/03/2024 08:42	10/14/2024 13:03	MRWD
Potassium	4.56	D2	mg/L	5.00	2.20	SW846 6010 B	10/03/2024 08:42	10/14/2024 16:21	AIS
Selenium	ND	u	mg/L	0.003	0.001	SW846-6020 A	10/03/2024 08:42	10/14/2024 13:03	MRWD
Sodium	150	D1	mg/L	26.0	10.0	SW846 6010 B	10/03/2024 08:42	10/14/2024 16:24	AIS
Thallium	ND	u	mg/L	0.0020	0.0001	SW846-6020 A	10/03/2024 08:42	10/14/2024 13:03	MRWD
Zinc	0.02		mg/L	0.02	0.004	SW846-6020 A	10/03/2024 08:42	10/14/2024 13:03	MRWD

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	4.1	J	ng/L	5.0	1.8	EPA 245.7 REV 2	10/04/2024 08:33	10/04/2024 12:50	TML

Conventional Chemistry Analyses Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Bicarbonate Alkalinity as CaCO ₃	178		mg/L	4	4	2320 B-2011	10/04/2024 13:12	10/04/2024 13:12	DJK
Carbonate Alkalinity as CaCO ₃	ND	u	mg/L	4		2320 B-2011	10/04/2024 13:12	10/04/2024 13:12	DJK
Total Alkalinity	178		mg/L	4	4	2320 B-2011	10/04/2024 13:12	10/04/2024 13:12	DJK
Chemical Oxygen Demand	30		mg/L	13	8	HACH 8000	10/08/2024 09:30	10/08/2024 16:43	ORK
Specific Conductance (Lab)	3510		uS/cm @ 25.0 °C	1	1	2510 B-2011	10/04/2024 11:24	10/04/2024 11:49	JEP
Total Dissolved Solids	3210		mg/L	250	250	2540 C-2015	10/04/2024 17:55	10/04/2024 17:55	HAG
Total Organic Carbon	1.4		mg/L	0.5	0.2	5310 C-2014	10/03/2024 10:30	10/04/2024 08:06	HMF

Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	0.057	_Sub	pCi/L			EPA 903.1	10/21/2024 16:15	10/21/2024 16:19	RCW

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Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	0.648	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW
Radium	0.705	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW
See Attached Subcontract Report	0.705	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW

Ion Chromatography Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Chloride	62.3		mg/L	0.5	0.4	EPA 300.0 REV 2.1	10/09/2024 00:37	10/09/2024 00:37	CLS3
Fluoride	ND	u	mg/L	0.20		EPA 300.0 REV 2.1	10/09/2024 00:37	10/09/2024 00:37	CLS3
Sulfate	1960	D	mg/L	50.0	50.0	EPA 300.0 REV 2.1	10/09/2024 01:03	10/09/2024 01:03	CLS3

Manual Calculation

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Hardness Calculation as CaCO₃	2150	D	mg/L	207	99.5	2340 B-1997	10/03/2024 08:42	10/15/2024 13:14	AIS



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ANALYTICAL RESULTS

Lab Sample ID: 4101343-20
Description: Mercury Field Blank MW-10

Sample Collection Date Time: 09/30/2024 15:25
Sample Received Date Time: 10/01/2024 14:00

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	v1, u	ng/L	5.0	1.8	EPA 245.7 REV 2	10/04/2024 08:33	10/04/2024 13:52	TML



ANALYTICAL RESULTS

Lab Sample ID: **4101343-21**Description: **MW-10D**

Sample Collection Date Time: 10/02/2024 07:40

Sample Received Date Time: 10/01/2024 14:00

Metals by SW846 6000 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Antimony	ND	u	mg/L	0.005	0.002	SW846-6020 A	10/03/2024 11:20	10/14/2024 14:07	MRWD
Arsenic	0.0017		mg/L	0.0010	0.0004	SW846-6020 A	10/03/2024 11:20	10/14/2024 14:07	MRWD
Barium	0.017		mg/L	0.004	0.001	SW846-6020 A	10/03/2024 11:20	10/14/2024 14:07	MRWD
Beryllium	ND	u	mg/L	0.0020	0.0010	SW846-6020 A	10/03/2024 11:20	10/14/2024 14:07	MRWD
Boron	2.92	D1	mg/L	1.00	1.00	SW846 6010 B	10/03/2024 11:20	10/14/2024 13:13	AIS
Cadmium	ND	u	mg/L	0.0010	0.0001	SW846-6020 A	10/03/2024 11:20	10/14/2024 14:07	MRWD
Calcium	544	D1	mg/L	50.0	25.0	SW846 6010 B	10/03/2024 11:20	10/14/2024 13:16	AIS
Chromium	ND	u	mg/L	0.0020	0.0006	SW846-6020 A	10/03/2024 11:20	10/14/2024 14:07	MRWD
Cobalt	0.010		mg/L	0.004	0.004	SW846-6020 A	10/03/2024 11:20	10/14/2024 14:07	MRWD
Copper	ND	u	mg/L	0.003	0.001	SW846-6020 A	10/03/2024 11:20	10/14/2024 14:07	MRWD
Iron	27.4	D1	mg/L	1.00	0.500	SW846 6010 B	10/03/2024 11:20	10/12/2024 01:38	AIS
Lead	ND	u	mg/L	0.002	0.0005	SW846-6020 A	10/03/2024 11:20	10/14/2024 14:07	MRWD
Lithium	0.08		mg/L	0.02	0.005	SW846-6020 A	10/03/2024 11:20	10/14/2024 14:07	MRWD
Magnesium	148	D1	mg/L	20.0	9.00	SW846 6010 B	10/03/2024 11:20	10/14/2024 13:16	AIS
Molybdenum	0.004	J	mg/L	0.01	0.002	SW846-6020 A	10/03/2024 11:20	10/14/2024 14:07	MRWD
Nickel	0.024		mg/L	0.003	0.001	SW846-6020 A	10/03/2024 11:20	10/14/2024 14:07	MRWD
Potassium	13.0	D1	mg/L	5.00	2.20	SW846 6010 B	10/03/2024 11:20	10/12/2024 01:38	AIS
Selenium	ND	u	mg/L	0.003	0.001	SW846-6020 A	10/03/2024 11:20	10/15/2024 13:04	MRWD
Sodium	96.5	D1	mg/L	2.60	1.00	SW846 6010 B	10/03/2024 11:20	10/14/2024 13:13	AIS
Thallium	ND	u	mg/L	0.0020	0.0001	SW846-6020 A	10/03/2024 11:20	10/14/2024 14:07	MRWD
Zinc	0.01	V1, J	mg/L	0.02	0.004	SW846-6020 A	10/03/2024 11:20	10/14/2024 14:07	MRWD

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	17.2		ng/L	5.0	1.8	EPA 245.7 REV 2	10/08/2024 08:12	10/08/2024 12:14	TML

Conventional Chemistry Analyses Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Bicarbonate Alkalinity as CaCO ₃	240		mg/L	4	4	2320 B-2011	10/04/2024 13:17	10/04/2024 13:17	DJK
Carbonate Alkalinity as CaCO ₃	ND	u	mg/L	4		2320 B-2011	10/04/2024 13:17	10/04/2024 13:17	DJK
Total Alkalinity	240		mg/L	4	4	2320 B-2011	10/04/2024 13:17	10/04/2024 13:17	DJK
Chemical Oxygen Demand	12	J	mg/L	13	8	HACH 8000	10/08/2024 09:30	10/08/2024 16:43	ORK
Specific Conductance (Lab)	3330		uS/cm @ 25.0 °C	1	1	2510 B-2011	10/04/2024 11:24	10/04/2024 11:49	JEP
Total Dissolved Solids	2240		mg/L	250	250	2540 C-2015	10/04/2024 17:55	10/04/2024 17:55	HAG
Total Organic Carbon	0.8		mg/L	0.5	0.2	5310 C-2014	10/03/2024 10:30	10/04/2024 08:27	HMF

Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	0.766	_Sub	pCi/L			EPA 903.1	10/21/2024 16:15	10/21/2024 16:19	RCW

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Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	0.982	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW
Radium	1.75	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW
See Attached Subcontract Report	1.75	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW

Ion Chromatography Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Chloride	168	D	mg/L	25.0	18.0	EPA 300.0 REV 2.1	10/10/2024 22:53	10/10/2024 22:53	CLS3
Fluoride	0.45		mg/L	0.20	0.18	EPA 300.0 REV 2.1	10/10/2024 22:26	10/10/2024 22:26	CLS3
Sulfate	1580	D	mg/L	50.0	50.0	EPA 300.0 REV 2.1	10/10/2024 22:53	10/10/2024 22:53	CLS3

Manual Calculation

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Hardness Calculation as CaCO3	1970	D	mg/L	207	99.5	2340 B-1997	10/03/2024 11:20	10/14/2024 13:16	AIS



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ANALYTICAL RESULTS

Lab Sample ID: 4101343-22
Description: Mercury Field Blank MW-10D

Sample Collection Date Time: 10/02/2024 07:00
Sample Received Date Time: 10/01/2024 14:00

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	v1, u	ng/L	5.0	1.8	EPA 245.7 REV 2	10/07/2024 08:52	10/07/2024 14:43	TML



ANALYTICAL RESULTS

Lab Sample ID: 4101343-23

Description: MW102

Sample Collection Date Time: 09/30/2024 11:00

Sample Received Date Time: 10/01/2024 14:00

Metals by SW846 6000 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Antimony	ND	u	mg/L	0.005	0.002	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:50	MRWD
Arsenic	0.0041		mg/L	0.0010	0.0004	SW846-6020 A	10/03/2024 08:42	10/14/2024 13:05	MRWD
Barium	0.039		mg/L	0.004	0.001	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:50	MRWD
Beryllium	ND	u	mg/L	0.0020	0.0010	SW846-6020 A	10/03/2024 08:42	10/14/2024 13:05	MRWD
Boron	ND	M2, u	mg/L	0.10	0.10	SW846 6010 B	10/03/2024 08:42	10/21/2024 14:03	AIS
Cadmium	ND	u	mg/L	0.0010	0.0001	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:50	MRWD
Calcium	90.2	D1, M3	mg/L	5.00	2.50	SW846 6010 B	10/03/2024 08:42	10/11/2024 22:46	AIS
Chromium	0.0010	J	mg/L	0.0020	0.0006	SW846-6020 A	10/03/2024 08:42	10/14/2024 13:05	MRWD
Cobalt	ND	u	mg/L	0.004	0.004	SW846-6020 A	10/03/2024 08:42	10/14/2024 13:05	MRWD
Copper	ND	u	mg/L	0.003	0.001	SW846-6020 A	10/03/2024 08:42	10/14/2024 13:05	MRWD
Iron	4.43	D1	mg/L	1.00	0.500	SW846 6010 B	10/03/2024 08:42	10/11/2024 22:46	AIS
Lead	ND	u	mg/L	0.002	0.0005	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:50	MRWD
Lithium	ND	u	mg/L	0.02	0.005	SW846-6020 A	10/03/2024 08:42	10/14/2024 13:05	MRWD
Magnesium	40.4	D1, M1	mg/L	2.00	0.900	SW846 6010 B	10/03/2024 08:42	10/11/2024 22:46	AIS
Molybdenum	ND	u	mg/L	0.01	0.002	SW846-6020 A	10/03/2024 08:42	10/14/2024 13:05	MRWD
Nickel	ND	u	mg/L	0.003	0.001	SW846-6020 A	10/03/2024 08:42	10/14/2024 13:05	MRWD
Potassium	1.18		mg/L	0.50	0.22	SW846 6010 B	10/03/2024 08:42	10/21/2024 14:03	AIS
Selenium	ND	u	mg/L	0.003	0.001	SW846-6020 A	10/03/2024 08:42	10/14/2024 13:05	MRWD
Sodium	134	D1, M3	mg/L	26.0	10.0	SW846 6010 B	10/03/2024 08:42	10/15/2024 13:08	AIS
Thallium	ND	u	mg/L	0.0020	0.0001	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:50	MRWD
Zinc	ND	u	mg/L	0.02	0.004	SW846-6020 A	10/03/2024 08:42	10/11/2024 17:50	MRWD

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	v1, u	ng/L	5.0	1.8	EPA 245.7 REV 2	10/07/2024 08:52	10/07/2024 12:07	TML

Conventional Chemistry Analyses Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Bicarbonate Alkalinity as CaCO3	291		mg/L	4	4	2320 B-2011	10/04/2024 13:21	10/04/2024 13:21	DJK
Carbonate Alkalinity as CaCO3	ND	u	mg/L	4		2320 B-2011	10/04/2024 13:21	10/04/2024 13:21	DJK
Total Alkalinity	291		mg/L	4	4	2320 B-2011	10/04/2024 13:21	10/04/2024 13:21	DJK
Chemical Oxygen Demand	10	J	mg/L	13	8	HACH 8000	10/08/2024 09:30	10/08/2024 16:43	ORK
Specific Conductance (Lab)	1250		uS/cm @ 25.0 °C	1	1	2510 B-2011	10/04/2024 11:24	10/04/2024 11:49	JEP
Total Dissolved Solids	868		mg/L	100	100	2540 C-2015	10/04/2024 17:55	10/04/2024 17:55	HAG
Total Organic Carbon	1.1		mg/L	0.5	0.2	5310 C-2014	10/03/2024 10:30	10/04/2024 08:49	HMF

Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
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Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	0.108	_Sub	pCi/L			EPA 903.1	10/21/2024 16:15	10/21/2024 16:19	RCW
See Attached Subcontract Report	0.703	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW
Radium	0.811	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW
See Attached Subcontract Report	0.811	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW

Ion Chromatography Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Chloride	31.9		mg/L	0.5	0.4	EPA 300.0 REV 2.1	10/10/2024 23:21	10/10/2024 23:21	CLS3
Fluoride	0.32		mg/L	0.20	0.18	EPA 300.0 REV 2.1	10/10/2024 23:21	10/10/2024 23:21	CLS3
Sulfate	300	D	mg/L	50.0	50.0	EPA 300.0 REV 2.1	10/10/2024 23:48	10/10/2024 23:48	CLS3

Manual Calculation

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Hardness Calculation as CaCO3	392	D	mg/L	20.7	9.95	2340 B-1997	10/03/2024 08:42	10/11/2024 22:46	AIS



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ANALYTICAL RESULTS

Lab Sample ID: 4101343-24
Description: Mercury Field Blank MW-102

Sample Collection Date Time: 09/30/2024 11:00
Sample Received Date Time: 10/01/2024 14:00

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	v1, u	ng/L	5.0	1.8	EPA 245.7 REV 2	10/07/2024 08:52	10/07/2024 14:09	TML



ANALYTICAL RESULTS

Lab Sample ID: **4101343-25**Description: **MW104**

Sample Collection Date Time: 09/30/2024 09:10

Sample Received Date Time: 10/01/2024 14:00

Metals by SW846 6000 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Antimony	ND	u	mg/L	0.005	0.002	SW846-6020 A	10/03/2024 08:40	10/14/2024 14:57	MRWD
Arsenic	0.0004	J	mg/L	0.0010	0.0004	SW846-6020 A	10/03/2024 08:40	10/14/2024 14:57	MRWD
Barium	0.031		mg/L	0.004	0.001	SW846-6020 A	10/03/2024 08:40	10/14/2024 14:57	MRWD
Beryllium	ND	u	mg/L	0.0020	0.0010	SW846-6020 A	10/03/2024 08:40	10/14/2024 14:57	MRWD
Boron	ND	M2, u	mg/L	0.10	0.10	SW846 6010 B	10/03/2024 08:40	10/21/2024 14:15	AIS
Cadmium	ND	u	mg/L	0.0010	0.0001	SW846-6020 A	10/03/2024 08:40	10/14/2024 14:57	MRWD
Calcium	327	M3, D1	mg/L	50.0	25.0	SW846 6010 B	10/03/2024 08:40	10/14/2024 13:00	AIS
Chromium	ND	u	mg/L	0.0020	0.0006	SW846-6020 A	10/03/2024 08:40	10/14/2024 14:57	MRWD
Cobalt	ND	u	mg/L	0.004	0.004	SW846-6020 A	10/03/2024 08:40	10/14/2024 14:57	MRWD
Copper	ND	u	mg/L	0.003	0.001	SW846-6020 A	10/03/2024 08:40	10/14/2024 14:57	MRWD
Iron	3.22	D1	mg/L	1.00	0.500	SW846 6010 B	10/03/2024 08:40	10/11/2024 23:28	AIS
Lead	ND	u	mg/L	0.002	0.0005	SW846-6020 A	10/03/2024 08:40	10/14/2024 14:57	MRWD
Lithium	0.03		mg/L	0.02	0.005	SW846-6020 A	10/03/2024 08:40	10/14/2024 14:57	MRWD
Magnesium	98.1	D1, M3	mg/L	2.00	0.900	SW846 6010 B	10/03/2024 08:40	10/11/2024 23:28	AIS
Molybdenum	ND	u	mg/L	0.01	0.002	SW846-6020 A	10/03/2024 08:40	10/14/2024 14:57	MRWD
Nickel	ND	u	mg/L	0.003	0.001	SW846-6020 A	10/03/2024 08:40	10/14/2024 14:57	MRWD
Potassium	3.41	D2, M2	mg/L	5.00	2.20	SW846 6010 B	10/03/2024 08:40	10/14/2024 12:57	AIS
Selenium	ND	u	mg/L	0.003	0.001	SW846-6020 A	10/03/2024 08:40	10/15/2024 13:11	MRWD
Sodium	87.7	D1, M1	mg/L	2.60	1.00	SW846 6010 B	10/03/2024 08:40	10/11/2024 23:28	AIS
Thallium	ND	u	mg/L	0.0020	0.0001	SW846-6020 A	10/03/2024 08:40	10/14/2024 14:57	MRWD
Zinc	ND	u	mg/L	0.02	0.004	SW846-6020 A	10/03/2024 08:40	10/14/2024 14:57	MRWD

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	v1, u	ng/L	5.0	1.8	EPA 245.7 REV 2	10/07/2024 08:52	10/07/2024 12:13	TML

Conventional Chemistry Analyses Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Bicarbonate Alkalinity as CaCO3	404		mg/L	4	4	2320 B-2011	10/04/2024 13:27	10/04/2024 13:27	DJK
Carbonate Alkalinity as CaCO3	ND	u	mg/L	4		2320 B-2011	10/04/2024 13:27	10/04/2024 13:27	DJK
Total Alkalinity	404		mg/L	4	4	2320 B-2011	10/04/2024 13:27	10/04/2024 13:27	DJK
Chemical Oxygen Demand	ND	u	mg/L	13	8	HACH 8000	10/08/2024 09:30	10/08/2024 16:43	ORK
Specific Conductance (Lab)	2130		uS/cm @ 25.0 °C	1	1	2510 B-2011	10/04/2024 11:24	10/04/2024 11:49	JEP
Total Dissolved Solids	2070		mg/L	250	250	2540 C-2015	10/04/2024 17:55	10/04/2024 17:55	HAG
Total Organic Carbon	0.9		mg/L	0.5	0.2	5310 C-2014	10/03/2024 10:30	10/04/2024 09:10	HMF

Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
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Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	0.422	_Sub	pCi/L			EPA 903.1	10/21/2024 16:15	10/21/2024 16:19	RCW
See Attached Subcontract Report	1.08	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW
Radium	1.50	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW
See Attached Subcontract Report	1.50	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW

Ion Chromatography Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Chloride	11.4		mg/L	0.5	0.4	EPA 300.0 REV 2.1	10/11/2024 00:16	10/11/2024 00:16	CLS3
Fluoride	ND	u	mg/L	0.20		EPA 300.0 REV 2.1	10/11/2024 00:16	10/11/2024 00:16	CLS3
Sulfate	904	D	mg/L	50.0	50.0	EPA 300.0 REV 2.1	10/11/2024 00:43	10/11/2024 00:43	CLS3

Manual Calculation

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Hardness Calculation as CaCO3	1220	D	mg/L	133	66.1	2340 B-1997	10/03/2024 08:40	10/14/2024 13:00	AIS



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ANALYTICAL RESULTS

Lab Sample ID: 4101343-26
Description: Mercury Field Blank MW-104

Sample Collection Date Time: 09/30/2024 09:10
Sample Received Date Time: 10/01/2024 14:00

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	v1, u	ng/L	5.0	1.8	EPA 245.7 REV 2	10/07/2024 08:52	10/07/2024 14:32	TML



ANALYTICAL RESULTS

Lab Sample ID: 4101343-27

Description: MW-105R

Sample Collection Date Time: 09/30/2024 07:08

Sample Received Date Time: 10/01/2024 14:00

Metals by SW846 6000 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Antimony	ND	u	mg/L	0.005	0.002	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:01	MRWD
Arsenic	0.0021		mg/L	0.0010	0.0004	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:01	MRWD
Barium	0.020		mg/L	0.004	0.001	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:01	MRWD
Beryllium	ND	u	mg/L	0.0020	0.0010	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:01	MRWD
Boron	ND	u	mg/L	0.10	0.10	SW846 6010 B	10/03/2024 08:40	10/21/2024 14:19	AIS
Cadmium	ND	u	mg/L	0.0010	0.0001	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:01	MRWD
Calcium	190	D1	mg/L	50.0	25.0	SW846 6010 B	10/03/2024 08:40	10/14/2024 14:49	AIS
Chromium	ND	u	mg/L	0.0020	0.0006	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:01	MRWD
Cobalt	ND	u	mg/L	0.004	0.004	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:01	MRWD
Copper	ND	u	mg/L	0.003	0.001	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:01	MRWD
Iron	2.52	D1	mg/L	1.00	0.500	SW846 6010 B	10/03/2024 08:40	10/11/2024 23:40	AIS
Lead	ND	u	mg/L	0.002	0.0005	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:01	MRWD
Lithium	0.03		mg/L	0.02	0.005	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:01	MRWD
Magnesium	58.6	D1	mg/L	2.00	0.900	SW846 6010 B	10/03/2024 08:40	10/11/2024 23:40	AIS
Molybdenum	ND	u	mg/L	0.01	0.002	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:01	MRWD
Nickel	ND	u	mg/L	0.003	0.001	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:01	MRWD
Potassium	2.15		mg/L	0.50	0.22	SW846 6010 B	10/03/2024 08:40	10/21/2024 14:19	AIS
Selenium	ND	u	mg/L	0.003	0.001	SW846-6020 A	10/03/2024 08:40	10/15/2024 13:13	MRWD
Sodium	37.5	D1	mg/L	2.60	1.00	SW846 6010 B	10/03/2024 08:40	10/11/2024 23:40	AIS
Thallium	ND	u	mg/L	0.0020	0.0001	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:01	MRWD
Zinc	ND	u	mg/L	0.02	0.004	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:01	MRWD

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	v1, u	ng/L	5.0	1.8	EPA 245.7 REV 2	10/07/2024 08:52	10/07/2024 12:18	TML

Conventional Chemistry Analyses Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Bicarbonate Alkalinity as CaCO3	413		mg/L	4	4	2320 B-2011	10/04/2024 13:33	10/04/2024 13:33	DJK
Carbonate Alkalinity as CaCO3	ND	u	mg/L	4		2320 B-2011	10/04/2024 13:33	10/04/2024 13:33	DJK
Total Alkalinity	413		mg/L	4	4	2320 B-2011	10/04/2024 13:33	10/04/2024 13:33	DJK
Chemical Oxygen Demand	122		mg/L	13	8	HACH 8000	10/08/2024 09:30	10/08/2024 16:43	ORK
Specific Conductance (Lab)	1320		uS/cm @ 25.0 °C	1	1	2510 B-2011	10/04/2024 11:24	10/04/2024 11:49	JEP
Total Dissolved Solids	1020		mg/L	100	100	2540 C-2015	10/04/2024 17:55	10/04/2024 17:55	HAG
Total Organic Carbon	1.0		mg/L	0.5	0.2	5310 C-2014	10/03/2024 10:30	10/04/2024 11:17	HMF

Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	0.566	_Sub	pCi/L			EPA 903.1	10/21/2024 16:15	10/21/2024 16:19	RCW



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Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	1.76	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW
Radium	2.33	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW
See Attached Subcontract Report	2.33	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW

Ion Chromatography Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Chloride	13.0		mg/L	0.5	0.4	EPA 300.0 REV 2.1	10/11/2024 13:26	10/11/2024 13:26	CLS3
Fluoride	ND	u	mg/L	0.20		EPA 300.0 REV 2.1	10/11/2024 13:26	10/11/2024 13:26	CLS3
Sulfate	342	D1	mg/L	50.0	50.0	EPA 300.0 REV 2.1	10/11/2024 13:54	10/11/2024 13:54	CLS3

Manual Calculation

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Hardness Calculation as CaCO3	717	D	mg/L	133	66.1	2340 B-1997	10/03/2024 08:40	10/14/2024 14:49	AIS



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ANALYTICAL RESULTS

Lab Sample ID: 4101343-28
Description: Mercury Field Blank MW-105R

Sample Collection Date Time: 09/30/2024 07:08
Sample Received Date Time: 10/01/2024 14:00

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	u	ng/L	5.0	1.8	EPA 245.7 REV 2	10/09/2024 08:20	10/09/2024 17:44	TML



ANALYTICAL RESULTS

Lab Sample ID: 4101343-29

Description: MW110

Sample Collection Date Time: 09/30/2024 07:30

Sample Received Date Time: 10/01/2024 14:00

Metals by SW846 6000 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Antimony	ND	u	mg/L	0.005	0.002	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:04	MRWD
Arsenic	0.0042		mg/L	0.0010	0.0004	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:04	MRWD
Barium	0.063		mg/L	0.004	0.001	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:04	MRWD
Beryllium	ND	u	mg/L	0.0020	0.0010	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:04	MRWD
Boron	ND	u	mg/L	0.10	0.10	SW846 6010 B	10/03/2024 08:40	10/21/2024 14:22	AIS
Cadmium	ND	u	mg/L	0.0010	0.0001	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:04	MRWD
Calcium	39.8	D1	mg/L	5.00	2.50	SW846 6010 B	10/03/2024 08:40	10/11/2024 23:43	AIS
Chromium	ND	u	mg/L	0.0020	0.0006	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:04	MRWD
Cobalt	ND	u	mg/L	0.004	0.004	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:04	MRWD
Copper	ND	u	mg/L	0.003	0.001	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:04	MRWD
Iron	6.10	D1	mg/L	1.00	0.500	SW846 6010 B	10/03/2024 08:40	10/11/2024 23:43	AIS
Lead	ND	u	mg/L	0.002	0.0005	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:04	MRWD
Lithium	ND	u	mg/L	0.02	0.005	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:04	MRWD
Magnesium	20.6	D1	mg/L	2.00	0.900	SW846 6010 B	10/03/2024 08:40	10/11/2024 23:43	AIS
Molybdenum	ND	u	mg/L	0.01	0.002	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:04	MRWD
Nickel	0.001	J	mg/L	0.003	0.001	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:04	MRWD
Potassium	0.53		mg/L	0.50	0.22	SW846 6010 B	10/03/2024 08:40	10/21/2024 14:22	AIS
Selenium	ND	u	mg/L	0.003	0.001	SW846-6020 A	10/03/2024 08:40	10/15/2024 13:15	MRWD
Sodium	27.3	D1	mg/L	2.60	1.00	SW846 6010 B	10/03/2024 08:40	10/11/2024 23:43	AIS
Thallium	ND	u	mg/L	0.0020	0.0001	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:04	MRWD
Zinc	ND	u	mg/L	0.02	0.004	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:04	MRWD

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	v1, u	ng/L	5.0	1.8	EPA 245.7 REV 2	10/07/2024 08:52	10/07/2024 12:24	TML

Conventional Chemistry Analyses Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Bicarbonate Alkalinity as CaCO3	145		mg/L	4	4	2320 B-2011	10/04/2024 13:40	10/04/2024 13:40	DJK
Carbonate Alkalinity as CaCO3	ND	u	mg/L	4		2320 B-2011	10/04/2024 13:40	10/04/2024 13:40	DJK
Total Alkalinity	145		mg/L	4	4	2320 B-2011	10/04/2024 13:40	10/04/2024 13:40	DJK
Chemical Oxygen Demand	45		mg/L	13	8	HACH 8000	10/08/2024 09:30	10/08/2024 16:43	ORK
Specific Conductance (Lab)	452		uS/cm @ 25.0 °C	1	1	2510 B-2011	10/04/2024 11:24	10/04/2024 11:49	JEP
Total Dissolved Solids	304		mg/L	50	50	2540 C-2015	10/04/2024 17:55	10/04/2024 17:55	HAG
Total Organic Carbon	1.6		mg/L	0.5	0.2	5310 C-2014	10/03/2024 10:30	10/04/2024 11:39	HMF

Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	0.637	_Sub	pCi/L			EPA 903.1	10/21/2024 16:15	10/21/2024 16:19	RCW



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Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	0.847	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW
Radium	1.48	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW
See Attached Subcontract Report	1.48	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW

Ion Chromatography Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Chloride	10.2		mg/L	0.5	0.4	EPA 300.0 REV 2.1	10/11/2024 13:38	10/11/2024 13:38	JBP1
Fluoride	0.26		mg/L	0.20	0.18	EPA 300.0 REV 2.1	10/11/2024 13:38	10/11/2024 13:38	JBP1
Sulfate	69.1		mg/L	1.0	1.0	EPA 300.0 REV 2.1	10/11/2024 13:38	10/11/2024 13:38	JBP1

Manual Calculation

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Hardness Calculation as CaCO3	184	D	mg/L	20.7	9.95	2340 B-1997	10/03/2024 08:40	10/11/2024 23:43	AIS



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ANALYTICAL RESULTS

Lab Sample ID: 4101343-30
Description: Mercury Field Blank MW-110

Sample Collection Date Time: 09/30/2024 07:30
Sample Received Date Time: 10/01/2024 14:00

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	v1, u	ng/L	5.0	1.8	EPA 245.7 REV 2	10/07/2024 08:52	10/07/2024 14:15	TML



ANALYTICAL RESULTS

Lab Sample ID: **4101343-31**Description: **MW-111**

Sample Collection Date Time: 09/30/2024 10:35

Sample Received Date Time: 10/01/2024 14:00

Metals by SW846 6000 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Antimony	ND	u	mg/L	0.005	0.002	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:08	MRWD
Arsenic	0.0024		mg/L	0.0010	0.0004	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:08	MRWD
Barium	0.015		mg/L	0.004	0.001	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:08	MRWD
Beryllium	ND	u	mg/L	0.0020	0.0010	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:08	MRWD
Boron	0.20		mg/L	0.10	0.10	SW846 6010 B	10/03/2024 08:40	10/21/2024 14:25	AIS
Cadmium	ND	u	mg/L	0.0010	0.0001	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:08	MRWD
Calcium	542	D1	mg/L	50.0	25.0	SW846 6010 B	10/03/2024 08:40	10/14/2024 14:52	AIS
Chromium	ND	u	mg/L	0.0020	0.0006	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:08	MRWD
Cobalt	0.013		mg/L	0.004	0.004	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:08	MRWD
Copper	0.002	J	mg/L	0.003	0.001	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:08	MRWD
Iron	12.3	D1	mg/L	1.00	0.500	SW846 6010 B	10/03/2024 08:40	10/11/2024 23:47	AIS
Lead	ND	u	mg/L	0.002	0.0005	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:08	MRWD
Lithium	0.03		mg/L	0.02	0.005	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:08	MRWD
Magnesium	273	D1	mg/L	20.0	9.00	SW846 6010 B	10/03/2024 08:40	10/15/2024 12:55	AIS
Molybdenum	0.003	J	mg/L	0.01	0.002	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:08	MRWD
Nickel	0.015		mg/L	0.003	0.001	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:08	MRWD
Potassium	6.50	D1	mg/L	5.00	2.20	SW846 6010 B	10/03/2024 08:40	10/11/2024 23:47	AIS
Selenium	ND	u	mg/L	0.003	0.001	SW846-6020 A	10/03/2024 08:40	10/15/2024 13:18	MRWD
Sodium	70.7	D1	mg/L	2.60	1.00	SW846 6010 B	10/03/2024 08:40	10/11/2024 23:47	AIS
Thallium	ND	u	mg/L	0.0020	0.0001	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:08	MRWD
Zinc	ND	u	mg/L	0.02	0.004	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:08	MRWD

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	v1, u	ng/L	5.0	1.8	EPA 245.7 REV 2	10/07/2024 08:52	10/07/2024 12:30	TML

Conventional Chemistry Analyses Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Bicarbonate Alkalinity as CaCO3	594		mg/L	4	4	2320 B-2011	10/04/2024 13:43	10/04/2024 13:43	DJK
Carbonate Alkalinity as CaCO3	ND	u	mg/L	4		2320 B-2011	10/04/2024 13:43	10/04/2024 13:43	DJK
Total Alkalinity	594		mg/L	4	4	2320 B-2011	10/04/2024 13:43	10/04/2024 13:43	DJK
Chemical Oxygen Demand	15		mg/L	13	8	HACH 8000	10/08/2024 09:35	10/08/2024 16:43	ORK
Specific Conductance (Lab)	3490		uS/cm @ 25.0 °C	1	1	2510 B-2011	10/04/2024 11:24	10/04/2024 11:49	JEP
Total Dissolved Solids	2340		mg/L	250	250	2540 C-2015	10/04/2024 17:55	10/04/2024 17:55	HAG
Total Organic Carbon	2.9		mg/L	0.5	0.2	5310 C-2014	10/03/2024 10:30	10/04/2024 12:00	HMF

Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	0.198	_Sub	pCi/L			EPA 903.1	10/21/2024 16:15	10/21/2024 16:19	RCW

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Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	0.507	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW
Radium	0.705	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW
See Attached Subcontract Report	0.705	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW

Ion Chromatography Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Chloride	3.6		mg/L	0.5	0.4	EPA 300.0 REV 2.1	10/11/2024 14:28	10/11/2024 14:28	JBP1
Fluoride	ND	u	mg/L	0.20		EPA 300.0 REV 2.1	10/11/2024 14:28	10/11/2024 14:28	JBP1
Sulfate	1740	D	mg/L	50.0	50.0	EPA 300.0 REV 2.1	10/11/2024 14:54	10/11/2024 14:54	JBP1

Manual Calculation

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Hardness Calculation as CaCO3	2480	D	mg/L	207	99.5	2340 B-1997	10/03/2024 08:40	10/15/2024 12:55	AIS



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ANALYTICAL RESULTS

Lab Sample ID: 4101343-32
Description: Mercury Field Blank MW-111

Sample Collection Date Time: 09/30/2024 10:35
Sample Received Date Time: 10/01/2024 14:00

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	v1, u	ng/L	5.0	1.8	EPA 245.7 REV 2	10/07/2024 08:52	10/07/2024 14:26	TML



ANALYTICAL RESULTS

Lab Sample ID: 4101343-33

Description: MW-112

Sample Collection Date Time: 10/02/2024 07:10

Sample Received Date Time: 10/01/2024 14:00

Metals by SW846 6000 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Antimony	ND	u	mg/L	0.005	0.002	SW846-6020 A	10/03/2024 11:20	10/14/2024 14:11	MRWD
Arsenic	0.0017		mg/L	0.0010	0.0004	SW846-6020 A	10/03/2024 11:20	10/14/2024 14:11	MRWD
Barium	0.027		mg/L	0.004	0.001	SW846-6020 A	10/03/2024 11:20	10/14/2024 14:11	MRWD
Beryllium	ND	u	mg/L	0.0020	0.0010	SW846-6020 A	10/03/2024 11:20	10/14/2024 14:11	MRWD
Boron	0.13		mg/L	0.10	0.10	SW846 6010 B	10/25/2024 09:37	10/25/2024 13:14	AIS
Cadmium	ND	u	mg/L	0.0010	0.0001	SW846-6020 A	10/03/2024 11:20	10/14/2024 14:11	MRWD
Calcium	241	D1	mg/L	50.0	25.0	SW846 6010 B	10/03/2024 11:20	10/14/2024 15:14	AIS
Chromium	ND	u	mg/L	0.0020	0.0006	SW846-6020 A	10/03/2024 11:20	10/14/2024 14:11	MRWD
Cobalt	0.005		mg/L	0.004	0.004	SW846-6020 A	10/03/2024 11:20	10/14/2024 14:11	MRWD
Copper	0.002	J	mg/L	0.003	0.001	SW846-6020 A	10/03/2024 11:20	10/14/2024 14:11	MRWD
Iron	1.68	D1	mg/L	1.00	0.500	SW846 6010 B	10/03/2024 11:20	10/12/2024 01:41	AIS
Lead	ND	u	mg/L	0.002	0.0005	SW846-6020 A	10/03/2024 11:20	10/14/2024 14:11	MRWD
Lithium	0.01	J	mg/L	0.02	0.005	SW846-6020 A	10/03/2024 11:20	10/14/2024 14:11	MRWD
Magnesium	66.6	D1	mg/L	2.00	0.900	SW846 6010 B	10/03/2024 11:20	10/12/2024 01:41	AIS
Molybdenum	0.002	J	mg/L	0.01	0.002	SW846-6020 A	10/03/2024 11:20	10/14/2024 14:11	MRWD
Nickel	0.007		mg/L	0.003	0.001	SW846-6020 A	10/03/2024 11:20	10/14/2024 14:11	MRWD
Potassium	4.00	D2	mg/L	5.00	2.20	SW846 6010 B	10/03/2024 11:20	10/12/2024 01:41	AIS
Selenium	ND	u	mg/L	0.003	0.001	SW846-6020 A	10/03/2024 11:20	10/15/2024 13:06	MRWD
Sodium	16.5	D1	mg/L	2.60	1.00	SW846 6010 B	10/03/2024 11:20	10/12/2024 01:41	AIS
Thallium	ND	u	mg/L	0.0020	0.0001	SW846-6020 A	10/03/2024 11:20	10/14/2024 14:11	MRWD
Zinc	0.007	V1, J	mg/L	0.02	0.004	SW846-6020 A	10/03/2024 11:20	10/14/2024 14:11	MRWD

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	v1, u	ng/L	5.0	1.8	EPA 245.7 REV 2	10/07/2024 08:52	10/07/2024 12:35	TML

Conventional Chemistry Analyses Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Bicarbonate Alkalinity as CaCO3	369		mg/L	4	4	2320 B-2011	10/04/2024 13:52	10/04/2024 13:52	DJK
Carbonate Alkalinity as CaCO3	ND	u	mg/L	4		2320 B-2011	10/04/2024 13:52	10/04/2024 13:52	DJK
Total Alkalinity	369		mg/L	4	4	2320 B-2011	10/04/2024 13:52	10/04/2024 13:52	DJK
Chemical Oxygen Demand	9	J	mg/L	13	8	HACH 8000	10/08/2024 09:35	10/08/2024 16:43	ORK
Specific Conductance (Lab)	1430		uS/cm @ 25.0 °C	1	1	2510 B-2011	10/04/2024 11:32	10/04/2024 11:49	JEP
Total Dissolved Solids	932		mg/L	100	100	2540 C-2015	10/04/2024 17:55	10/04/2024 17:55	HAG
Total Organic Carbon	3.0		mg/L	0.5	0.2	5310 C-2014	10/03/2024 10:30	10/04/2024 12:22	HMF

Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	0.848	_Sub	pCi/L			EPA 903.1	10/21/2024 16:15	10/21/2024 16:19	RCW



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Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	0.727	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW
Radium	1.58	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW
See Attached Subcontract Report	1.58	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW

Ion Chromatography Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Chloride	3.1		mg/L	0.5	0.4	EPA 300.0 REV 2.1	10/11/2024 19:22	10/11/2024 19:22	CLS3
Fluoride	ND	u	mg/L	0.20		EPA 300.0 REV 2.1	10/11/2024 19:22	10/11/2024 19:22	CLS3
Sulfate	498	D1	mg/L	50.0	50.0	EPA 300.0 REV 2.1	10/11/2024 19:50	10/11/2024 19:50	CLS3

Manual Calculation

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Hardness Calculation as CaCO3	877	D	mg/L	133	66.1	2340 B-1997	10/03/2024 11:20	10/14/2024 15:14	AIS



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ANALYTICAL RESULTS

Lab Sample ID: 4101343-34
Description: Mercury Field Blank MW-112

Sample Collection Date Time: 10/02/2024 07:10
Sample Received Date Time: 10/01/2024 14:00

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	v1, u	ng/L	5.0	1.8	EPA 245.7 REV 2	10/07/2024 08:52	10/07/2024 14:37	TML



ANALYTICAL RESULTS

Lab Sample ID: **4101343-35**Description: **MW-113**

Sample Collection Date Time: 09/30/2024 07:35

Sample Received Date Time: 10/01/2024 14:00

Metals by SW846 6000 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Antimony	ND	u	mg/L	0.005	0.002	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:11	MRWD
Arsenic	0.0175		mg/L	0.0010	0.0004	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:11	MRWD
Barium	0.017		mg/L	0.004	0.001	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:11	MRWD
Beryllium	ND	u	mg/L	0.0020	0.0010	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:11	MRWD
Boron	ND	u	mg/L	0.10	0.10	SW846 6010 B	10/03/2024 08:40	10/21/2024 14:28	AIS
Cadmium	ND	u	mg/L	0.0010	0.0001	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:11	MRWD
Calcium	207	D1	mg/L	50.0	25.0	SW846 6010 B	10/03/2024 08:40	10/14/2024 14:55	AIS
Chromium	0.0006	J	mg/L	0.0020	0.0006	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:11	MRWD
Cobalt	ND	u	mg/L	0.004	0.004	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:11	MRWD
Copper	ND	u	mg/L	0.003	0.001	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:11	MRWD
Iron	9.05	D1	mg/L	1.00	0.500	SW846 6010 B	10/03/2024 08:40	10/11/2024 23:50	AIS
Lead	ND	u	mg/L	0.002	0.0005	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:11	MRWD
Lithium	0.04		mg/L	0.02	0.005	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:11	MRWD
Magnesium	92.8	D1	mg/L	2.00	0.900	SW846 6010 B	10/03/2024 08:40	10/11/2024 23:50	AIS
Molybdenum	0.002	J	mg/L	0.01	0.002	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:11	MRWD
Nickel	0.007		mg/L	0.003	0.001	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:11	MRWD
Potassium	2.47		mg/L	0.50	0.22	SW846 6010 B	10/03/2024 08:40	10/21/2024 14:28	AIS
Selenium	ND	u	mg/L	0.003	0.001	SW846-6020 A	10/03/2024 08:40	10/16/2024 11:24	MRWD
Sodium	147	D1	mg/L	26.0	10.0	SW846 6010 B	10/03/2024 08:40	10/14/2024 14:55	AIS
Thallium	ND	u	mg/L	0.0020	0.0001	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:11	MRWD
Zinc	ND	u	mg/L	0.02	0.004	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:11	MRWD

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	v1, u	ng/L	5.0	1.8	EPA 245.7 REV 2	10/07/2024 08:52	10/07/2024 12:41	TML

Conventional Chemistry Analyses Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Bicarbonate Alkalinity as CaCO ₃	407		mg/L	4	4	2320 B-2011	10/04/2024 13:58	10/04/2024 13:58	DJK
Carbonate Alkalinity as CaCO ₃	ND	u	mg/L	4		2320 B-2011	10/04/2024 13:58	10/04/2024 13:58	DJK
Total Alkalinity	407		mg/L	4	4	2320 B-2011	10/04/2024 13:58	10/04/2024 13:58	DJK
Chemical Oxygen Demand	29		mg/L	13	8	HACH 8000	10/08/2024 09:35	10/08/2024 16:43	ORK
Specific Conductance (Lab)	2090		uS/cm @ 25.0 °C	1	1	2510 B-2011	10/04/2024 11:32	10/04/2024 11:49	JEP
Total Dissolved Solids	1410		mg/L	250	250	2540 C-2015	10/04/2024 17:55	10/04/2024 17:55	HAG
Total Organic Carbon	4.9		mg/L	0.5	0.2	5310 C-2014	10/03/2024 10:30	10/04/2024 12:43	HMF

Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	0.169	_Sub	pCi/L			EPA 903.1	10/21/2024 16:15	10/21/2024 16:19	RCW



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Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	2.57	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW
Radium	2.74	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW
See Attached Subcontract Report	2.74	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW

Ion Chromatography Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Chloride	40.8		mg/L	0.5	0.4	EPA 300.0 REV 2.1	10/11/2024 22:36	10/11/2024 22:36	CLS3
Fluoride	ND	u	mg/L	0.20		EPA 300.0 REV 2.1	10/11/2024 22:36	10/11/2024 22:36	CLS3
Sulfate	827	D1	mg/L	50.0	50.0	EPA 300.0 REV 2.1	10/11/2024 23:04	10/11/2024 23:04	CLS3

Manual Calculation

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Hardness Calculation as CaCO3	899	D	mg/L	133	66.1	2340 B-1997	10/03/2024 08:40	10/14/2024 14:55	AIS



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ANALYTICAL RESULTS

Lab Sample ID: 4101343-36
Description: Mercury Field Blank MW-113

Sample Collection Date Time: 09/30/2024 07:35
Sample Received Date Time: 10/01/2024 14:00

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	v1, u	ng/L	5.0	1.8	EPA 245.7 REV 2	10/07/2024 08:52	10/07/2024 14:49	TML



ANALYTICAL RESULTS

Lab Sample ID: 4101343-37

Description: MW-114

Sample Collection Date Time: 09/30/2024 09:55

Sample Received Date Time: 10/01/2024 14:00

Metals by SW846 6000 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Antimony	ND	u	mg/L	0.005	0.002	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:15	MRWD
Arsenic	0.0017		mg/L	0.0010	0.0004	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:15	MRWD
Barium	0.049		mg/L	0.004	0.001	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:15	MRWD
Beryllium	ND	u	mg/L	0.0020	0.0010	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:15	MRWD
Boron	ND	u	mg/L	0.10	0.10	SW846 6010 B	10/03/2024 08:40	10/21/2024 14:31	AIS
Cadmium	ND	u	mg/L	0.0010	0.0001	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:15	MRWD
Calcium	105	D1	mg/L	50.0	25.0	SW846 6010 B	10/03/2024 08:40	10/14/2024 14:58	AIS
Chromium	ND	u	mg/L	0.0020	0.0006	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:15	MRWD
Cobalt	ND	u	mg/L	0.004	0.004	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:15	MRWD
Copper	ND	u	mg/L	0.003	0.001	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:15	MRWD
Iron	1.01	D1	mg/L	1.00	0.500	SW846 6010 B	10/03/2024 08:40	10/11/2024 23:53	AIS
Lead	ND	u	mg/L	0.002	0.0005	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:15	MRWD
Lithium	0.02		mg/L	0.02	0.005	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:15	MRWD
Magnesium	26.0	D1	mg/L	2.00	0.900	SW846 6010 B	10/03/2024 08:40	10/11/2024 23:53	AIS
Molybdenum	0.002	J	mg/L	0.01	0.002	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:15	MRWD
Nickel	0.003		mg/L	0.003	0.001	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:15	MRWD
Potassium	1.67		mg/L	0.50	0.22	SW846 6010 B	10/03/2024 08:40	10/21/2024 14:31	AIS
Selenium	ND	u	mg/L	0.003	0.001	SW846-6020 A	10/03/2024 08:40	10/16/2024 11:26	MRWD
Sodium	79.6	D1	mg/L	2.60	1.00	SW846 6010 B	10/03/2024 08:40	10/11/2024 23:53	AIS
Thallium	ND	u	mg/L	0.0020	0.0001	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:15	MRWD
Zinc	ND	u	mg/L	0.02	0.004	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:15	MRWD

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	v1, u	ng/L	5.0	1.8	EPA 245.7 REV 2	10/07/2024 08:52	10/07/2024 12:47	TML

Conventional Chemistry Analyses Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Bicarbonate Alkalinity as CaCO3	322		mg/L	4	4	2320 B-2011	10/04/2024 14:05	10/04/2024 14:05	DJK
Carbonate Alkalinity as CaCO3	ND	u	mg/L	4		2320 B-2011	10/04/2024 14:05	10/04/2024 14:05	DJK
Total Alkalinity	322	M3	mg/L	4	4	2320 B-2011	10/04/2024 14:05	10/04/2024 14:05	DJK
Chemical Oxygen Demand	ND	u	mg/L	13	8	HACH 8000	10/08/2024 09:35	10/08/2024 16:43	ORK
Specific Conductance (Lab)	1020		uS/cm @ 25.0 °C	1	1	2510 B-2011	10/04/2024 11:32	10/04/2024 11:49	JEP
Total Dissolved Solids	924		mg/L	100	100	2540 C-2015	10/04/2024 17:55	10/04/2024 17:55	HAG
Total Organic Carbon	1.6		mg/L	0.5	0.2	5310 C-2014	10/03/2024 10:30	10/04/2024 13:04	HMF

Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	0.555	_Sub	pCi/L			EPA 903.1	10/21/2024 16:15	10/21/2024 16:19	RCW



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Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	1.97	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW
Radium	2.53	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW
See Attached Subcontract Report	2.53	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW

Ion Chromatography Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Chloride	37.0		mg/L	0.5	0.4	EPA 300.0 REV 2.1	10/11/2024 23:31	10/11/2024 23:31	CLS3
Fluoride	0.20		mg/L	0.20	0.18	EPA 300.0 REV 2.1	10/11/2024 23:31	10/11/2024 23:31	CLS3
Sulfate	174		mg/L	1.0	1.0	EPA 300.0 REV 2.1	10/11/2024 23:31	10/11/2024 23:31	CLS3

Manual Calculation

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Hardness Calculation as CaCO3	369	D	mg/L	133	66.1	2340 B-1997	10/03/2024 08:40	10/14/2024 14:58	AIS



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ANALYTICAL RESULTS

Lab Sample ID: 4101343-38
Description: Mercury Field Blank MW-114

Sample Collection Date Time: 09/30/2024 09:55
Sample Received Date Time: 10/01/2024 14:00

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	v1, u	ng/L	5.0	1.8	EPA 245.7 REV 2	10/07/2024 08:52	10/07/2024 14:54	TML



ANALYTICAL RESULTS

Lab Sample ID: **4101343-39**

Sample Collection Date Time: 09/30/2024 08:10

Description: **Well Duplicate 1**

Sample Received Date Time: 10/01/2024 14:00

Metals by SW846 6000 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Antimony	ND	u	mg/L	0.005	0.002	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:19	MRWD
Arsenic	0.0017		mg/L	0.0010	0.0004	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:19	MRWD
Barium	0.051		mg/L	0.004	0.001	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:19	MRWD
Beryllium	ND	u	mg/L	0.0020	0.0010	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:19	MRWD
Boron	ND	u	mg/L	0.10	0.10	SW846 6010 B	10/03/2024 08:40	10/21/2024 14:34	AIS
Cadmium	ND	u	mg/L	0.0010	0.0001	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:19	MRWD
Calcium	37.4	D1	mg/L	5.00	2.50	SW846 6010 B	10/03/2024 08:40	10/11/2024 23:56	AIS
Chromium	ND	u	mg/L	0.0020	0.0006	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:19	MRWD
Cobalt	ND	u	mg/L	0.004	0.004	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:19	MRWD
Copper	ND	u	mg/L	0.003	0.001	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:19	MRWD
Iron	3.73	D1	mg/L	1.00	0.500	SW846 6010 B	10/03/2024 08:40	10/11/2024 23:56	AIS
Lead	ND	u	mg/L	0.002	0.0005	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:19	MRWD
Lithium	ND	u	mg/L	0.02	0.005	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:19	MRWD
Magnesium	18.5	D1	mg/L	2.00	0.900	SW846 6010 B	10/03/2024 08:40	10/11/2024 23:56	AIS
Molybdenum	ND	u	mg/L	0.01	0.002	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:19	MRWD
Nickel	0.003		mg/L	0.003	0.001	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:19	MRWD
Potassium	0.55		mg/L	0.50	0.22	SW846 6010 B	10/03/2024 08:40	10/21/2024 14:34	AIS
Selenium	ND	u	mg/L	0.003	0.001	SW846-6020 A	10/03/2024 08:40	10/16/2024 11:28	MRWD
Sodium	25.8	D1	mg/L	2.60	1.00	SW846 6010 B	10/03/2024 08:40	10/11/2024 23:56	AIS
Thallium	ND	u	mg/L	0.0020	0.0001	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:19	MRWD
Zinc	ND	u	mg/L	0.02	0.004	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:19	MRWD

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	u	ng/L	5.0	1.8	EPA 245.7 REV 2	10/08/2024 08:12	10/08/2024 12:20	TML

Conventional Chemistry Analyses Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Bicarbonate Alkalinity as CaCO3	152		mg/L	4	4	2320 B-2011	10/04/2024 16:01	10/04/2024 16:01	DJK
Carbonate Alkalinity as CaCO3	ND	u	mg/L	4		2320 B-2011	10/04/2024 16:01	10/04/2024 16:01	DJK
Total Alkalinity	152		mg/L	4	4	2320 B-2011	10/04/2024 16:01	10/04/2024 16:01	DJK
Chemical Oxygen Demand	9	J	mg/L	13	8	HACH 8000	10/08/2024 09:35	10/08/2024 16:43	ORK
Specific Conductance (Lab)	436		uS/cm @ 25.0 °C	1	1	2510 B-2011	10/04/2024 11:32	10/04/2024 11:49	JEP
Total Dissolved Solids	354		mg/L	50	50	2540 C-2015	10/04/2024 17:55	10/04/2024 17:55	HAG
Total Organic Carbon	1.4		mg/L	0.5	0.2	5310 C-2014	10/03/2024 10:30	10/04/2024 13:25	HMF

Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	0.213	_Sub	pCi/L			EPA 903.1	10/21/2024 16:15	10/21/2024 16:19	RCW



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Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	0.351	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW
Radium	0.564	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW
See Attached Subcontract Report	0.564	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW

Ion Chromatography Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Chloride	11.0		mg/L	0.5	0.4	EPA 300.0 REV 2.1	10/12/2024 00:27	10/12/2024 00:27	CLS3
Fluoride	0.24		mg/L	0.20	0.18	EPA 300.0 REV 2.1	10/12/2024 00:27	10/12/2024 00:27	CLS3
Sulfate	74.6		mg/L	1.0	1.0	EPA 300.0 REV 2.1	10/12/2024 00:27	10/12/2024 00:27	CLS3

Manual Calculation

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Hardness Calculation as CaCO3	169	D	mg/L	20.7	9.95	2340 B-1997	10/03/2024 08:40	10/11/2024 23:56	AIS



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ANALYTICAL RESULTS

Lab Sample ID: 4101343-40
Description: Mercury Field Blank Well Dup-1

Sample Collection Date Time: 09/30/2024 08:10
Sample Received Date Time: 10/01/2024 14:00

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	u	ng/L	5.0	1.8	EPA 245.7 REV 2	10/09/2024 08:20	10/09/2024 17:50	TML



ANALYTICAL RESULTS

Lab Sample ID: **4101343-41**

Sample Collection Date Time: 10/01/2024 10:57

Description: **Well Duplicate 2**

Sample Received Date Time: 10/01/2024 14:00

Metals by SW846 6000 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Antimony	ND	u	mg/L	0.005	0.002	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:22	MRWD
Arsenic	0.0009	J	mg/L	0.0010	0.0004	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:22	MRWD
Barium	0.016		mg/L	0.004	0.001	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:22	MRWD
Beryllium	ND	u	mg/L	0.0020	0.0010	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:22	MRWD
Boron	0.86		mg/L	0.10	0.10	SW846 6010 B	10/03/2024 08:40	10/21/2024 14:38	AIS
Cadmium	ND	u	mg/L	0.0010	0.0001	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:22	MRWD
Calcium	269	D1	mg/L	50.0	25.0	SW846 6010 B	10/03/2024 08:40	10/14/2024 15:01	AIS
Chromium	ND	u	mg/L	0.0020	0.0006	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:22	MRWD
Cobalt	0.005		mg/L	0.004	0.004	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:22	MRWD
Copper	ND	u	mg/L	0.003	0.001	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:22	MRWD
Iron	3.50	D1	mg/L	1.00	0.500	SW846 6010 B	10/03/2024 08:40	10/11/2024 23:59	AIS
Lead	ND	u	mg/L	0.002	0.0005	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:22	MRWD
Lithium	0.03		mg/L	0.02	0.005	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:22	MRWD
Magnesium	80.0	D1	mg/L	2.00	0.900	SW846 6010 B	10/03/2024 08:40	10/11/2024 23:59	AIS
Molybdenum	0.003	J	mg/L	0.01	0.002	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:22	MRWD
Nickel	0.005		mg/L	0.003	0.001	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:22	MRWD
Potassium	5.77	D1	mg/L	5.00	2.20	SW846 6010 B	10/03/2024 08:40	10/11/2024 23:59	AIS
Selenium	ND	u	mg/L	0.003	0.001	SW846-6020 A	10/03/2024 08:40	10/16/2024 11:31	MRWD
Sodium	40.0	D1	mg/L	2.60	1.00	SW846 6010 B	10/03/2024 08:40	10/11/2024 23:59	AIS
Thallium	ND	u	mg/L	0.0020	0.0001	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:22	MRWD
Zinc	ND	u	mg/L	0.02	0.004	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:22	MRWD

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	u	ng/L	5.0	1.8	EPA 245.7 REV 2	10/08/2024 08:12	10/08/2024 12:26	TML

Conventional Chemistry Analyses Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Bicarbonate Alkalinity as CaCO3	328		mg/L	4	4	2320 B-2011	10/04/2024 16:05	10/04/2024 16:05	DJK
Carbonate Alkalinity as CaCO3	ND	u	mg/L	4		2320 B-2011	10/04/2024 16:05	10/04/2024 16:05	DJK
Total Alkalinity	328	M3	mg/L	4	4	2320 B-2011	10/04/2024 16:05	10/04/2024 16:05	DJK
Chemical Oxygen Demand	ND	u	mg/L	13	8	HACH 8000	10/08/2024 09:35	10/08/2024 16:43	ORK
Specific Conductance (Lab)	1750		uS/cm @ 25.0 °C	1	1	2510 B-2011	10/04/2024 11:32	10/04/2024 11:49	JEP
Total Dissolved Solids	1420		mg/L	100	100	2540 C-2015	10/04/2024 17:55	10/04/2024 17:55	HAG
Total Organic Carbon	0.8		mg/L	0.5	0.2	5310 C-2014	10/03/2024 10:30	10/04/2024 13:47	HMF

Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	-0.745	_Sub	pCi/L			EPA 903.1	10/21/2024 16:15	10/21/2024 16:19	RCW

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Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	0.018	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW
Radium	0.018	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW
See Attached Subcontract Report	0.018	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW

Ion Chromatography Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Chloride	57.4		mg/L	0.5	0.4	EPA 300.0 REV 2.1	10/12/2024 01:22	10/12/2024 01:22	CLS3
Fluoride	0.23		mg/L	0.20	0.18	EPA 300.0 REV 2.1	10/12/2024 01:22	10/12/2024 01:22	CLS3
Sulfate	673	D1	mg/L	50.0	50.0	EPA 300.0 REV 2.1	10/12/2024 01:50	10/12/2024 01:50	CLS3

Manual Calculation

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Hardness Calculation as CaCO3	1000	D	mg/L	133	66.1	2340 B-1997	10/03/2024 08:40	10/14/2024 15:01	AIS



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ANALYTICAL RESULTS

Lab Sample ID: 4101343-42
Description: Mercury Field Blank Well Dup-2

Sample Collection Date Time: 10/01/2024 10:57
Sample Received Date Time: 10/01/2024 14:00

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	u	ng/L	5.0	1.8	EPA 245.7 REV 2	10/09/2024 08:20	10/09/2024 17:56	TML



ANALYTICAL RESULTS

Lab Sample ID: **4101343-43**Description: **Field Blank**

Sample Collection Date Time: 10/01/2024 08:50

Sample Received Date Time: 10/01/2024 14:00

Metals by SW846 6000 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Antimony	ND	u	mg/L	0.005	0.002	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:26	MRWD
Arsenic	ND	u	mg/L	0.0010	0.0004	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:26	MRWD
Barium	ND	u	mg/L	0.004	0.001	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:26	MRWD
Beryllium	ND	u	mg/L	0.0020	0.0010	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:26	MRWD
Boron	ND	M2, U	mg/L	0.10	0.10	SW846 6010 B	10/03/2024 08:40	10/21/2024 14:41	AIS
Cadmium	ND	u	mg/L	0.0010	0.0001	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:26	MRWD
Calcium	ND	u	mg/L	0.50	0.25	SW846 6010 B	10/03/2024 08:40	10/21/2024 14:41	AIS
Chromium	ND	u	mg/L	0.0020	0.0006	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:26	MRWD
Cobalt	ND	u	mg/L	0.004	0.004	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:26	MRWD
Copper	ND	u	mg/L	0.003	0.001	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:26	MRWD
Iron	ND	u	mg/L	0.100	0.050	SW846 6010 B	10/03/2024 08:40	10/21/2024 14:41	AIS
Lead	ND	u	mg/L	0.002	0.0005	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:26	MRWD
Lithium	ND	u	mg/L	0.02	0.005	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:26	MRWD
Magnesium	ND	u	mg/L	0.200	0.090	SW846 6010 B	10/03/2024 08:40	10/21/2024 14:41	AIS
Molybdenum	ND	u	mg/L	0.01	0.002	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:26	MRWD
Nickel	ND	u	mg/L	0.003	0.001	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:26	MRWD
Potassium	ND	u	mg/L	0.50	0.22	SW846 6010 B	10/03/2024 08:40	10/21/2024 14:41	AIS
Selenium	ND	u	mg/L	0.003	0.001	SW846-6020 A	10/03/2024 08:40	10/16/2024 11:33	MRWD
Sodium	ND	u	mg/L	0.26	0.10	SW846 6010 B	10/03/2024 08:40	10/21/2024 14:41	AIS
Thallium	ND	u	mg/L	0.0020	0.0001	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:26	MRWD
Zinc	ND	u	mg/L	0.02	0.004	SW846-6020 A	10/03/2024 08:40	10/14/2024 15:26	MRWD

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	27.5		ng/L	5.0	1.8	EPA 245.7 REV 2	10/08/2024 08:12	10/08/2024 12:31	TML

Conventional Chemistry Analyses Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Bicarbonate Alkalinity as CaCO ₃	ND	u	mg/L	4		2320 B-2011	10/04/2024 16:11	10/04/2024 16:11	DJK
Carbonate Alkalinity as CaCO ₃	ND	u	mg/L	4		2320 B-2011	10/04/2024 16:11	10/04/2024 16:11	DJK
Total Alkalinity	ND	u	mg/L	4		2320 B-2011	10/04/2024 16:11	10/04/2024 16:11	DJK
Chemical Oxygen Demand	ND	u	mg/L	13	8	HACH 8000	10/08/2024 09:35	10/08/2024 16:43	ORK
Specific Conductance (Lab)	12		uS/cm @ 25.0 °C	1	1	2510 B-2011	10/04/2024 11:32	10/04/2024 11:49	JEP
Total Dissolved Solids	30	H2, G1	mg/L	25	25	2540 C-2015	10/21/2024 18:44	10/21/2024 18:44	HAG
Total Organic Carbon	0.2	J	mg/L	0.5	0.2	5310 C-2014	10/03/2024 10:30	10/04/2024 15:12	HMF

Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	-0.161	_Sub	pCi/L			EPA 903.1	10/21/2024 16:15	10/21/2024 16:19	RCW



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Subcontracted Analyses

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
See Attached Subcontract Report	0.281	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW
Radium	0.281	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW
See Attached Subcontract Report	0.281	_Sub	pCi/L			EPA 904.0 Radium Sum Calc	10/21/2024 16:15	10/21/2024 16:19	RCW

Ion Chromatography Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Chloride	ND	u	mg/L	0.5	0.4	EPA 300.0 REV 2.1	10/12/2024 02:17	10/12/2024 02:17	CLS3
Fluoride	ND	u	mg/L	0.20		EPA 300.0 REV 2.1	10/12/2024 02:17	10/12/2024 02:17	CLS3
Sulfate	ND	u	mg/L	1.0	1.0	EPA 300.0 REV 2.1	10/12/2024 02:17	10/12/2024 02:17	CLS3

Manual Calculation

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Hardness Calculation as CaCO3	ND	u	mg/L	2.07	0.995	2340 B-1997	10/03/2024 08:40	10/21/2024 14:41	AIS



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ANALYTICAL RESULTS

Lab Sample ID: 4101343-44
Description: Mercury Field Blank

Sample Collection Date Time: 10/01/2024 08:50
Sample Received Date Time: 10/01/2024 14:00

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Mercury	ND	u	ng/L	5.0	1.8	EPA 245.7 REV 2	10/09/2024 08:20	10/09/2024 16:59	TML



Notes for work order 4101343

- Samples collected by PACE personnel are done so in accordance with procedures set forth in PACE field services SOPs .
 - Results contained in this report are only representative of the samples received.
 - PACE does not provide interpretation of these results unless otherwise stated .
 - All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
 - All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
 - Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
 - The Chain of Custody document is included as part of this report.
 - All Library Search analytes should be regarded as tentative identification based on the presumptive evidence of the mass spectra.
- Concentrations reported are estimated values.

Qualifiers

_Sub	See subcontractors report.
D	Results reported from dilution.
D1	Sample required dilution due to high concentration of target analyte.
D2	Sample required dilution due to matrix interference.
E	Concentration exceeds calibration range
G1	Residue yield was less than the method required 2.5mg.
H2	Initial analysis within holding time. Reanalysis was past holding time.
J	Estimated value.
J5	Concentration estimated. Internal standard recoveries did not meet method acceptance criteria.
M1	Matrix spike recovery was high; the method control sample recovery was acceptable.
M2	Matrix spike recovery was low; the method control sample recovery was acceptable.
M3	The accuracy of the spike recovery value is reduced since the analyte concentration in the sample is disproportionate to spike level. The method control sample recovery was acceptable.
M7	Matrix spike recovery was low.
U	Target analyte was analyzed for, but was below detection limit (the value associated with the qualifier is the laboratory method detection limit in our LIMS system).
V1	CCV recovery was above method acceptance limits. This target analyte not detected in the sample.
Y1	Sample RPD exceeded the method control limit.
Y2	MS/MSD RPD exceeded the method control limit. Recovery met acceptance criteria.
Y5	MS/MSD RPD exceeded the method control limit.

Standard Qualifiers/Acronyms

MDL	Method Detection Limit
MRL	Minimum Reporting Limit
ND	Not Detected
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
% Rec	Percent Recovery
RPD	Relative Percent Difference
>	Greater than
<	Less than



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Metals by SW846 6000 Series Methods Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDJ0204 - EPA 200.2

Blank (BDJ0204-BLK1)

Prepared: 10/3/2024 8:42, Analyzed: 10/11/2024 22:05

Boron	ND	0.10	mg/L							U
Calcium	ND	0.50	mg/L							U
Iron	ND	0.100	mg/L							U
Magnesium	ND	0.200	mg/L							U
Potassium	ND	0.50	mg/L							U
Sodium	ND	0.26	mg/L							U

Blank (BDJ0204-BLK2)

Prepared: 10/3/2024 8:42, Analyzed: 10/11/2024 16:55

Antimony	ND	0.005	mg/L							U
Molybdenum	ND	0.01	mg/L							U
Arsenic	ND	0.0010	mg/L							U
Barium	ND	0.004	mg/L							U
Beryllium	ND	0.0020	mg/L							U
Cadmium	ND	0.0010	mg/L							U
Chromium	ND	0.0020	mg/L							U
Cobalt	ND	0.004	mg/L							U
Copper	ND	0.003	mg/L							U
Lead	ND	0.002	mg/L							U
Lithium	ND	0.02	mg/L							U
Nickel	ND	0.003	mg/L							U
Selenium	ND	0.003	mg/L							U
Thallium	ND	0.0020	mg/L							U
Zinc	ND	0.02	mg/L							U

Blank (BDJ0204-BLK3)

Prepared: 10/3/2024 8:42, Analyzed: 10/14/2024 12:28

Selenium	ND	0.003	mg/L							U
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LCS (BDJ0204-BS1)

Prepared: 10/3/2024 8:42, Analyzed: 10/11/2024 22:08

Boron	0.13	0.10	mg/L	0.125		105	85-115			
Calcium	6.42	0.50	mg/L	6.25		103	85-115			
Iron	6.20	0.100	mg/L	6.25		99.2	85-115			
Magnesium	6.16	0.200	mg/L	6.25		98.5	85-115			
Potassium	6.39	0.50	mg/L	6.25		102	85-115			
Sodium	6.12	0.26	mg/L	6.25		97.9	85-115			



Metals by SW846 6000 Series Methods Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDJ0204 - EPA 200.2

LCS (BDJ0204-BS2)

Prepared: 10/3/2024 8:42, Analyzed: 10/11/2024 16:58

Antimony	0.064	0.005	mg/L	0.0625		103	85-115			
Molybdenum	0.06	0.01	mg/L	0.0625		99.9	85-115			
Arsenic	0.0619	0.0010	mg/L	0.0625		99.1	85-115			
Barium	0.062	0.004	mg/L	0.0625		100	85-115			
Beryllium	0.0637	0.0020	mg/L	0.0625		102	85-115			
Cadmium	0.0611	0.0010	mg/L	0.0625		97.8	85-115			
Chromium	0.0600	0.0020	mg/L	0.0625		96.0	85-115			
Cobalt	0.060	0.004	mg/L	0.0625		96.8	85-115			
Copper	0.060	0.003	mg/L	0.0625		96.0	85-115			
Lead	0.060	0.002	mg/L	0.0625		96.6	85-115			
Lithium	0.07	0.02	mg/L	0.0625		107	85-115			
Nickel	0.060	0.003	mg/L	0.0625		96.5	85-115			
Selenium	0.060	0.003	mg/L	0.0625		95.7	85-115			
Thallium	0.0614	0.0020	mg/L	0.0625		98.3	85-115			
Zinc	0.06	0.02	mg/L	0.0625		99.7	85-115			

LCS (BDJ0204-BS3)

Prepared: 10/3/2024 8:42, Analyzed: 10/14/2024 12:30

Selenium	0.061	0.003	mg/L	0.0625		97.2	85-115			
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Matrix Spike (BDJ0204-MS1)

Source: 4101343-01

Prepared: 10/3/2024 8:42, Analyzed: 10/11/2024 22:49

Boron	ND	1.00	mg/L	0.125	ND		80-120			D2, U
Calcium	554	5.00	mg/L	6.25	547	106	80-120			D2, M3
Iron	59.2	1.00	mg/L	6.25	53.7	87.3	80-120			D2
Magnesium	182	2.00	mg/L	6.25	193	NR	80-120			D2, M3
Potassium	7.26	5.00	mg/L	6.25	6.95	5.04	80-120			D2, M2
Sodium	110	2.60	mg/L	6.25	97.6	198	80-120			D2, M3

Matrix Spike (BDJ0204-MS2)

Source: 4101343-23

Prepared: 10/3/2024 8:42, Analyzed: 10/11/2024 23:05

Boron	ND	1.00	mg/L	0.125	ND		80-120			D2, M2, U
Calcium	103	5.00	mg/L	6.25	90.2	196	80-120			D2, M3
Iron	11.3	1.00	mg/L	6.25	4.43	109	80-120			D2
Magnesium	49.3	2.00	mg/L	6.25	40.4	141	80-120			D2, M1
Potassium	7.48	5.00	mg/L	6.25	ND	120	80-120			D2
Sodium	143	2.60	mg/L	6.25	134	152	80-120			D2, M3



Metals by SW846 6000 Series Methods Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDJ0204 - EPA 200.2

Matrix Spike (BDJ0204-MS3)

Source: 4101343-01

Prepared: 10/3/2024 8:42, Analyzed: 10/11/2024 17:53

Antimony	0.067	0.005	mg/L	0.0625	ND	108	80-120			
Molybdenum	0.07	0.01	mg/L	0.0625	0.004	98.8	80-120			
Arsenic	0.0660	0.0010	mg/L	0.0625	0.0022	102	80-120			
Barium	0.069	0.004	mg/L	0.0625	0.009	96.7	80-120			
Beryllium	0.0562	0.0020	mg/L	0.0625	ND	89.9	80-120			
Cadmium	0.0606	0.0010	mg/L	0.0625	0.0021	93.6	80-120			
Chromium	0.0609	0.0020	mg/L	0.0625	0.0006	97.5	80-120			
Cobalt	0.275	0.004	mg/L	0.0625	0.220	87.9	80-120			
Copper	0.057	0.003	mg/L	0.0625	ND	90.9	80-120			
Lead	0.061	0.002	mg/L	0.0625	ND	98.4	80-120			
Lithium	0.19	0.02	mg/L	0.0625	0.13	91.5	80-120			
Nickel	0.473	0.003	mg/L	0.0625	0.426	76.3	80-120			M2
Selenium	0.056	0.003	mg/L	0.0625	ND	90.1	80-120			
Thallium	0.0625	0.0020	mg/L	0.0625	0.0002	99.6	80-120			
Zinc	0.68	0.02	mg/L	0.0625	0.07	976	80-120			M3, E

Matrix Spike (BDJ0204-MS4)

Source: 4101343-23

Prepared: 10/3/2024 8:42, Analyzed: 10/11/2024 18:01

Molybdenum	0.07	0.01	mg/L	0.0625	ND	108	80-120			
Antimony	0.065	0.005	mg/L	0.0625	ND	105	80-120			
Arsenic	0.0672	0.0010	mg/L	0.0625	0.0041	101	80-120			
Barium	0.100	0.004	mg/L	0.0625	0.039	98.8	80-120			
Beryllium	0.0581	0.0020	mg/L	0.0625	ND	93.0	80-120			
Cadmium	0.0587	0.0010	mg/L	0.0625	ND	93.9	80-120			
Chromium	0.0614	0.0020	mg/L	0.0625	0.0010	96.6	80-120			
Cobalt	0.063	0.004	mg/L	0.0625	ND	101	80-120			
Copper	0.060	0.003	mg/L	0.0625	ND	96.6	80-120			
Lead	0.061	0.002	mg/L	0.0625	ND	97.9	80-120			
Lithium	0.06	0.02	mg/L	0.0625	ND	101	80-120			
Nickel	0.061	0.003	mg/L	0.0625	ND	97.7	80-120			
Selenium	0.057	0.003	mg/L	0.0625	ND	90.8	80-120			
Thallium	0.0618	0.0020	mg/L	0.0625	ND	98.9	80-120			
Zinc	0.07	0.02	mg/L	0.0625	ND	109	80-120			



Metals by SW846 6000 Series Methods Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDJ0204 - EPA 200.2

Matrix Spike Dup (BDJ0204-MSD1)

Source: 4101343-01

Prepared: 10/3/2024 8:42, Analyzed: 10/11/2024 23:02

Boron	ND	1.00	mg/L	0.125	ND		80-120		20	D2, M2, U
Calcium	571	5.00	mg/L	6.25	547	391	80-120	3.17	20	M3, D2
Iron	61.1	1.00	mg/L	6.25	53.7	117	80-120	3.10	20	D2
Magnesium	188	2.00	mg/L	6.25	193	NR	80-120	3.20	20	D2, M3
Potassium	13.9	5.00	mg/L	6.25	6.95	111	80-120	62.8	20	D2, Y2
Sodium	113	2.60	mg/L	6.25	97.6	246	80-120	2.71	20	D2, M3

Matrix Spike Dup (BDJ0204-MSD2)

Source: 4101343-23

Prepared: 10/3/2024 8:42, Analyzed: 10/11/2024 23:08

Boron	ND	1.00	mg/L	0.125	ND		80-120		20	D2, M2, U
Calcium	97.3	5.00	mg/L	6.25	90.2	113	80-120	5.18	20	D2
Iron	10.6	1.00	mg/L	6.25	4.43	99.0	80-120	5.87	20	D2
Magnesium	47.0	2.00	mg/L	6.25	40.4	104	80-120	4.78	20	D2
Potassium	7.30	5.00	mg/L	6.25	ND	117	80-120	2.45	20	D2
Sodium	136	2.60	mg/L	6.25	134	35.8	80-120	5.20	20	D2, M3

Matrix Spike Dup (BDJ0204-MSD3)

Source: 4101343-01

Prepared: 10/3/2024 8:42, Analyzed: 10/11/2024 17:57

Antimony	0.066	0.005	mg/L	0.0625	ND	106	80-120	1.30	20	
Molybdenum	0.07	0.01	mg/L	0.0625	0.004	97.8	80-120	0.947	20	
Arsenic	0.0667	0.0010	mg/L	0.0625	0.0022	103	80-120	1.16	20	
Barium	0.069	0.004	mg/L	0.0625	0.009	95.8	80-120	0.747	20	
Beryllium	0.0556	0.0020	mg/L	0.0625	ND	89.0	80-120	1.03	20	
Cadmium	0.0597	0.0010	mg/L	0.0625	0.0021	92.1	80-120	1.51	20	
Chromium	0.0620	0.0020	mg/L	0.0625	0.0006	99.3	80-120	1.83	20	
Cobalt	0.281	0.004	mg/L	0.0625	0.220	96.9	80-120	2.03	20	
Copper	0.058	0.003	mg/L	0.0625	ND	92.6	80-120	1.81	20	
Lead	0.061	0.002	mg/L	0.0625	ND	96.9	80-120	1.52	20	
Lithium	0.19	0.02	mg/L	0.0625	0.13	86.7	80-120	1.61	20	
Nickel	0.484	0.003	mg/L	0.0625	0.426	93.8	80-120	2.29	20	
Selenium	0.056	0.003	mg/L	0.0625	ND	89.9	80-120	0.187	20	
Thallium	0.0621	0.0020	mg/L	0.0625	0.0002	99.0	80-120	0.660	20	
Zinc	0.71	0.02	mg/L	0.0625	0.07	NR	80-120	3.52	20	M3, E



Metals by SW846 6000 Series Methods Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDJ0204 - EPA 200.2

Matrix Spike Dup (BDJ0204-MSD4)

Source: 4101343-23

Prepared: 10/3/2024 8:42, Analyzed: 10/11/2024 18:04

Molybdenum	0.07	0.01	mg/L	0.0625	ND	106	80-120	1.81	20	
Antimony	0.065	0.005	mg/L	0.0625	ND	104	80-120	0.486	20	
Arsenic	0.0666	0.0010	mg/L	0.0625	0.0041	100	80-120	0.969	20	
Barium	0.099	0.004	mg/L	0.0625	0.039	97.2	80-120	0.999	20	
Beryllium	0.0568	0.0020	mg/L	0.0625	ND	90.9	80-120	2.19	20	
Cadmium	0.0581	0.0010	mg/L	0.0625	ND	93.0	80-120	0.973	20	
Chromium	0.0603	0.0020	mg/L	0.0625	0.0010	94.8	80-120	1.82	20	
Cobalt	0.063	0.004	mg/L	0.0625	ND	100	80-120	0.844	20	
Copper	0.059	0.003	mg/L	0.0625	ND	95.0	80-120	1.59	20	
Lead	0.060	0.002	mg/L	0.0625	ND	96.3	80-120	1.67	20	
Lithium	0.06	0.02	mg/L	0.0625	ND	100	80-120	0.316	20	
Nickel	0.061	0.003	mg/L	0.0625	ND	97.2	80-120	0.504	20	
Selenium	0.055	0.003	mg/L	0.0625	ND	88.2	80-120	2.90	20	
Thallium	0.0611	0.0020	mg/L	0.0625	ND	97.7	80-120	1.23	20	
Zinc	0.06	0.02	mg/L	0.0625	ND	102	80-120	6.46	20	

Post Spike (BDJ0204-PS1)

Source: 4101343-01

Prepared: 10/3/2024 8:42, Analyzed: 10/11/2024 23:12

Boron	330		ug/L	125	200	104	75-125			D2, M1
Calcium	557000		ug/L	6250	547000	159	75-125			D2, M3
Iron	60600		ug/L	6250	53700	110	75-125			D2, M1
Magnesium	184000		ug/L	6250	193000	NR	75-125			D2, M3
Potassium	13800		ug/L	6250	6950	110	75-125			D2, M1
Sodium	110000		ug/L	6250	97600	199	75-125			D2, M3

Post Spike (BDJ0204-PS2)

Source: 4101343-01

Prepared: 10/3/2024 8:42, Analyzed: 10/11/2024 18:08

Antimony	65.1		ug/L	62.5	0.262	104	75-125			
Molybdenum	67.5		ug/L	62.5	4.18	101	75-125			
Arsenic	66.9		ug/L	62.5	2.20	103	75-125			
Barium	67.8		ug/L	62.5	8.94	94.1	75-125			
Beryllium	54.9		ug/L	62.5	0.107	87.7	75-125			
Cadmium	58.7		ug/L	62.5	2.06	90.6	75-125			
Chromium	61.4		ug/L	62.5	0.572	97.4	75-125			
Cobalt	275		ug/L	62.5	220	88.0	75-125			
Copper	57.7		ug/L	62.5	0.533	91.5	75-125			
Lead	59.5		ug/L	62.5	0.021	95.2	75-115			
Lithium	183		ug/L	62.5	131	83.2	75-125			
Nickel	475		ug/L	62.5	426	78.9	75-125			
Selenium	55.8		ug/L	62.5	0.025	89.2	75-125			
Thallium	61.1		ug/L	62.5	0.245	97.3	75-125			
Zinc	696		ug/L	62.5	74.3	995	75-125			M3



Metals by SW846 6000 Series Methods Madisonville - Quality Control

Analyte	Result	Reporting		Spike	Source	%REC		RPD	Notes
		Limit	Units			%REC	Limits		

Batch BDJ0205 - EPA 200.2

Blank (BDJ0205-BLK1)

Prepared: 10/3/2024 8:40, Analyzed: 10/11/2024 23:18

Boron	ND	0.10	mg/L						U
Calcium	ND	0.50	mg/L						U
Iron	ND	0.100	mg/L						U
Magnesium	ND	0.200	mg/L						U
Potassium	ND	0.50	mg/L						U
Sodium	ND	0.26	mg/L						U

Blank (BDJ0205-BLK3)

Prepared: 10/3/2024 8:40, Analyzed: 10/14/2024 14:29

Molybdenum	ND	0.01	mg/L						U
Antimony	ND	0.005	mg/L						U
Arsenic	ND	0.0010	mg/L						U
Barium	ND	0.004	mg/L						U
Beryllium	ND	0.0020	mg/L						U
Cadmium	ND	0.0010	mg/L						U
Chromium	ND	0.0020	mg/L						U
Cobalt	ND	0.004	mg/L						U
Copper	ND	0.003	mg/L						U
Lead	ND	0.002	mg/L						U
Lithium	ND	0.02	mg/L						U
Nickel	ND	0.003	mg/L						U
Selenium	ND	0.003	mg/L						U
Thallium	ND	0.0020	mg/L						U
Zinc	ND	0.02	mg/L						U

LCS (BDJ0205-BS1)

Prepared: 10/3/2024 8:40, Analyzed: 10/11/2024 23:21

Boron	0.13	0.10	mg/L	0.125		106	85-115
Calcium	6.37	0.50	mg/L	6.25		102	85-115
Iron	6.13	0.100	mg/L	6.25		98.2	85-115
Magnesium	6.12	0.200	mg/L	6.25		97.8	85-115
Potassium	6.30	0.50	mg/L	6.25		101	85-115
Sodium	5.95	0.26	mg/L	6.25		95.2	85-115



Metals by SW846 6000 Series Methods Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDJ0205 - EPA 200.2

LCS (BDJ0205-BS3)

Prepared: 10/3/2024 8:40, Analyzed: 10/14/2024 14:33

Antimony	0.059	0.005	mg/L	0.0625		93.7	85-115			
Molybdenum	0.06	0.01	mg/L	0.0625		93.1	85-115			
Arsenic	0.0596	0.0010	mg/L	0.0625		95.3	85-115			
Barium	0.056	0.004	mg/L	0.0625		88.8	85-115			
Beryllium	0.0565	0.0020	mg/L	0.0625		90.4	85-115			
Cadmium	0.0571	0.0010	mg/L	0.0625		91.3	85-115			
Chromium	0.0574	0.0020	mg/L	0.0625		91.9	85-115			
Cobalt	0.058	0.004	mg/L	0.0625		93.2	85-115			
Copper	0.058	0.003	mg/L	0.0625		93.2	85-115			
Lead	0.057	0.002	mg/L	0.0625		91.5	85-115			
Lithium	0.05	0.02	mg/L	0.0625		86.9	85-115			
Nickel	0.058	0.003	mg/L	0.0625		93.1	85-115			
Selenium	0.065	0.003	mg/L	0.0625		104	85-115			
Thallium	0.0576	0.0020	mg/L	0.0625		92.2	85-115			
Zinc	0.06	0.02	mg/L	0.0625		94.7	85-115			

Matrix Spike (BDJ0205-MS1)

Source: 4101343-25

Prepared: 10/3/2024 8:40, Analyzed: 10/12/2024 0:06

Boron	ND	1.00	mg/L	0.125	ND		80-120			D2, M2, U
Calcium	341	5.00	mg/L	6.25	327	213	80-120			D2, M3
Iron	9.57	1.00	mg/L	6.25	3.22	102	80-120			D2
Magnesium	106	2.00	mg/L	6.25	98.1	131	80-120			M3, D2
Potassium	9.10	5.00	mg/L	6.25	3.41	91.0	80-120			D2
Sodium	96.0	2.60	mg/L	6.25	87.7	133	80-120			D2, M1

Matrix Spike (BDJ0205-MS2)

Source: 4101343-43

Prepared: 10/3/2024 8:40, Analyzed: 10/12/2024 0:22

Boron	ND	1.00	mg/L	0.125	ND		80-120			D2, M2, U
Calcium	6.31	5.00	mg/L	6.25	ND	101	80-120			D2
Iron	6.12	1.00	mg/L	6.25	ND	97.9	80-120			D2
Magnesium	6.24	2.00	mg/L	6.25	ND	99.8	80-120			D2
Potassium	6.22	5.00	mg/L	6.25	ND	99.5	80-120			D2
Sodium	5.97	2.60	mg/L	6.25	ND	95.5	80-120			D2



Metals by SW846 6000 Series Methods Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDJ0205 - EPA 200.2

Matrix Spike (BDJ0205-MS3)

Source: 4101343-25

Prepared: 10/3/2024 8:40, Analyzed: 10/14/2024 15:48

Molybdenum	0.06	0.01	mg/L	0.0625	ND	102	80-120			
Antimony	0.067	0.005	mg/L	0.0625	ND	107	80-120			
Arsenic	0.0638	0.0010	mg/L	0.0625	0.0004	101	80-120			
Barium	0.091	0.004	mg/L	0.0625	0.031	95.6	80-120			
Beryllium	0.0571	0.0020	mg/L	0.0625	ND	91.4	80-120			
Cadmium	0.0599	0.0010	mg/L	0.0625	ND	95.9	80-120			
Chromium	0.0605	0.0020	mg/L	0.0625	ND	96.9	80-120			
Cobalt	0.060	0.004	mg/L	0.0625	ND	95.7	80-120			
Copper	0.057	0.003	mg/L	0.0625	ND	91.4	80-120			
Lead	0.061	0.002	mg/L	0.0625	ND	97.1	80-120			
Lithium	0.09	0.02	mg/L	0.0625	0.03	91.5	80-120			
Nickel	0.058	0.003	mg/L	0.0625	ND	92.4	80-120			
Selenium	0.060	0.003	mg/L	0.0625	ND	95.7	80-120			
Thallium	0.0620	0.0020	mg/L	0.0625	ND	99.2	80-120			
Zinc	0.05	0.02	mg/L	0.0625	ND	79.2	80-120			M7

Matrix Spike (BDJ0205-MS4)

Source: 4101343-43

Prepared: 10/3/2024 8:40, Analyzed: 10/14/2024 15:55

Antimony	0.063	0.005	mg/L	0.0625	ND	101	80-120			
Molybdenum	0.06	0.01	mg/L	0.0625	ND	103	80-120			
Arsenic	0.0625	0.0010	mg/L	0.0625	ND	100	80-120			
Barium	0.060	0.004	mg/L	0.0625	ND	95.5	80-120			
Beryllium	0.0604	0.0020	mg/L	0.0625	ND	96.6	80-120			
Cadmium	0.0605	0.0010	mg/L	0.0625	ND	96.9	80-120			
Chromium	0.0603	0.0020	mg/L	0.0625	ND	96.4	80-120			
Cobalt	0.061	0.004	mg/L	0.0625	ND	97.2	80-120			
Copper	0.061	0.003	mg/L	0.0625	ND	96.9	80-120			
Lead	0.062	0.002	mg/L	0.0625	ND	98.7	80-120			
Lithium	0.06	0.02	mg/L	0.0625	ND	95.7	80-120			
Nickel	0.060	0.003	mg/L	0.0625	ND	95.4	80-120			
Selenium	0.059	0.003	mg/L	0.0625	ND	93.9	80-120			
Thallium	0.0619	0.0020	mg/L	0.0625	ND	99.0	80-120			
Zinc	0.05	0.02	mg/L	0.0625	ND	85.2	80-120			



Metals by SW846 6000 Series Methods Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDJ0205 - EPA 200.2

Matrix Spike Dup (BDJ0205-MSD1)

Source: 4101343-25

Prepared: 10/3/2024 8:40, Analyzed: 10/12/2024 0:18

Boron	ND	1.00	mg/L	0.125	ND		80-120		20	D2, M2, U
Calcium	334	5.00	mg/L	6.25	327	114	80-120	1.83	20	D2, M3
Iron	9.52	1.00	mg/L	6.25	3.22	101	80-120	0.552	20	D2
Magnesium	105	2.00	mg/L	6.25	98.1	107	80-120	1.43	20	D2, M3
Potassium	8.92	5.00	mg/L	6.25	3.41	88.3	80-120	1.91	20	D2
Sodium	94.6	2.60	mg/L	6.25	87.7	111	80-120	1.47	20	D2

Matrix Spike Dup (BDJ0205-MSD2)

Source: 4101343-43

Prepared: 10/3/2024 8:40, Analyzed: 10/12/2024 0:25

Boron	ND	1.00	mg/L	0.125	ND		80-120		20	D2, M2, U
Calcium	6.47	5.00	mg/L	6.25	ND	104	80-120	2.45	20	D2
Iron	6.33	1.00	mg/L	6.25	ND	101	80-120	3.35	20	D2
Magnesium	6.43	2.00	mg/L	6.25	ND	103	80-120	3.04	20	D2
Potassium	6.19	5.00	mg/L	6.25	ND	99.1	80-120	0.493	20	D2
Sodium	6.17	2.60	mg/L	6.25	ND	98.7	80-120	3.32	20	D2

Matrix Spike Dup (BDJ0205-MSD3)

Source: 4101343-25

Prepared: 10/3/2024 8:40, Analyzed: 10/14/2024 15:52

Molybdenum	0.07	0.01	mg/L	0.0625	ND	107	80-120	5.18	20	
Antimony	0.068	0.005	mg/L	0.0625	ND	108	80-120	1.68	20	
Arsenic	0.0654	0.0010	mg/L	0.0625	0.0004	104	80-120	2.44	20	
Barium	0.091	0.004	mg/L	0.0625	0.031	95.9	80-120	0.193	20	
Beryllium	0.0589	0.0020	mg/L	0.0625	ND	94.3	80-120	3.07	20	
Cadmium	0.0607	0.0010	mg/L	0.0625	ND	97.0	80-120	1.16	20	
Chromium	0.0620	0.0020	mg/L	0.0625	ND	99.2	80-120	2.36	20	
Cobalt	0.061	0.004	mg/L	0.0625	ND	98.2	80-120	2.57	20	
Copper	0.058	0.003	mg/L	0.0625	ND	93.3	80-120	2.13	20	
Lead	0.062	0.002	mg/L	0.0625	ND	98.7	80-120	1.65	20	
Lithium	0.09	0.02	mg/L	0.0625	0.03	94.9	80-120	2.44	20	
Nickel	0.059	0.003	mg/L	0.0625	ND	94.7	80-120	2.38	20	
Selenium	0.057	0.003	mg/L	0.0625	ND	91.2	80-120	4.92	20	
Thallium	0.0632	0.0020	mg/L	0.0625	ND	101	80-120	1.87	20	
Zinc	0.05	0.02	mg/L	0.0625	ND	78.3	80-120	1.23	20	M7



Metals by SW846 6000 Series Methods Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDJ0205 - EPA 200.2

Matrix Spike Dup (BDJ0205-MSD4)

Source: 4101343-43

Prepared: 10/3/2024 8:40, Analyzed: 10/14/2024 15:59

Antimony	0.066	0.005	mg/L	0.0625	ND	106	80-120	4.89	20	
Molybdenum	0.07	0.01	mg/L	0.0625	ND	109	80-120	5.91	20	
Arsenic	0.0664	0.0010	mg/L	0.0625	ND	106	80-120	6.11	20	
Barium	0.063	0.004	mg/L	0.0625	ND	101	80-120	5.24	20	
Beryllium	0.0626	0.0020	mg/L	0.0625	ND	100	80-120	3.51	20	
Cadmium	0.0624	0.0010	mg/L	0.0625	ND	99.8	80-120	2.97	20	
Chromium	0.0648	0.0020	mg/L	0.0625	ND	104	80-120	7.23	20	
Cobalt	0.065	0.004	mg/L	0.0625	ND	105	80-120	7.40	20	
Copper	0.066	0.003	mg/L	0.0625	ND	105	80-120	8.21	20	
Lead	0.064	0.002	mg/L	0.0625	ND	102	80-120	3.03	20	
Lithium	0.06	0.02	mg/L	0.0625	ND	100	80-120	4.32	20	
Nickel	0.065	0.003	mg/L	0.0625	ND	103	80-120	8.15	20	
Selenium	0.060	0.003	mg/L	0.0625	ND	95.8	80-120	1.94	20	
Thallium	0.0640	0.0020	mg/L	0.0625	ND	102	80-120	3.38	20	
Zinc	0.06	0.02	mg/L	0.0625	ND	92.6	80-120	8.32	20	

Post Spike (BDJ0205-PS1)

Source: 4101343-25

Prepared: 10/3/2024 8:40, Analyzed: 10/12/2024 0:28

Boron	73.7		ug/L	125	57.4	13.0	75-125			M2, D2, J5
Calcium	329000		ug/L	6250	327000	24.0	75-125			D2, M3
Iron	9330		ug/L	6250	3220	97.9	75-125			D2
Magnesium	104000		ug/L	6250	98100	94.8	75-125			D2, M3
Potassium	2920		ug/L	6250	3410	NR	75-125			D2, M2
Sodium	93100		ug/L	6250	87700	85.6	75-125			D2

Post Spike (BDJ0205-PS2)

Source: 4101343-25

Prepared: 10/3/2024 8:40, Analyzed: 10/14/2024 16:02

Molybdenum	64.0		ug/L	62.5	0.59	102	75-125			
Antimony	58.1		ug/L	62.5	0.132	92.7	75-125			
Arsenic	63.7		ug/L	62.5	0.428	101	75-125			
Barium	80.7		ug/L	62.5	31.1	79.5	75-125			
Beryllium	50.8		ug/L	62.5	0.0076	81.3	75-125			
Cadmium	52.7		ug/L	62.5	0.0022	84.3	75-125			
Chromium	60.9		ug/L	62.5	0.273	97.0	75-125			
Cobalt	59.8		ug/L	62.5	0.111	95.5	75-125			
Copper	57.2		ug/L	62.5	0.454	90.9	75-125			
Lead	53.8		ug/L	62.5	0.037	86.1	75-115			
Lithium	76.6		ug/L	62.5	27.9	78.0	75-125			
Nickel	57.6		ug/L	62.5	0.563	91.2	75-125			
Selenium	55.3		ug/L	62.5	0.021	88.4	75-125			
Thallium	55.1		ug/L	62.5	-0.0011	88.1	75-125			
Zinc	49.2		ug/L	62.5	-3.03	78.7	75-125			



Metals by SW846 6000 Series Methods Madisonville - Quality Control

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD	Notes
		Limit	Units			%REC	Limits		

Batch BDJ0402 - EPA 200.2

Blank (BDJ0402-BLK1)

Prepared: 10/3/2024 11:20, Analyzed: 10/12/2024 0:34

Boron	ND	0.10	mg/L						U
Calcium	ND	0.50	mg/L						U
Iron	ND	0.100	mg/L						U
Magnesium	ND	0.200	mg/L						U
Potassium	ND	0.50	mg/L						U
Sodium	ND	0.26	mg/L						U

Blank (BDJ0402-BLK2)

Prepared: 10/3/2024 11:20, Analyzed: 10/14/2024 13:23

Antimony	ND	0.005	mg/L						U
Molybdenum	ND	0.01	mg/L						U
Arsenic	ND	0.0010	mg/L						U
Barium	ND	0.004	mg/L						U
Beryllium	ND	0.0020	mg/L						U
Cadmium	ND	0.0010	mg/L						U
Chromium	ND	0.0020	mg/L						U
Cobalt	ND	0.004	mg/L						U
Copper	0.001	0.003	mg/L						J
Lead	ND	0.002	mg/L						U
Lithium	ND	0.02	mg/L						U
Nickel	ND	0.003	mg/L						U
Selenium	ND	0.003	mg/L						U
Thallium	ND	0.0020	mg/L						U
Zinc	0.007	0.02	mg/L						J

LCS (BDJ0402-BS1)

Prepared: 10/3/2024 11:20, Analyzed: 10/12/2024 0:38

Boron	0.13	0.10	mg/L	0.125		102	85-115
Calcium	6.78	0.50	mg/L	6.25		108	85-115
Iron	6.43	0.100	mg/L	6.25		103	85-115
Magnesium	6.38	0.200	mg/L	6.25		102	85-115
Potassium	6.59	0.50	mg/L	6.25		106	85-115
Sodium	6.20	0.26	mg/L	6.25		99.2	85-115



Metals by SW846 6000 Series Methods Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDJ0402 - EPA 200.2

LCS (BDJ0402-BS2)

Prepared: 10/3/2024 11:20, Analyzed: 10/12/2024 0:41

Boron	ND	0.10	mg/L				85-115			U
Calcium	ND	0.50	mg/L				85-115			U
Iron	ND	0.100	mg/L				85-115			U
Magnesium	ND	0.200	mg/L				85-115			U
Potassium	ND	0.50	mg/L				85-115			U
Sodium	ND	0.26	mg/L				85-115			U

LCS (BDJ0402-BS3)

Prepared: 10/3/2024 11:20, Analyzed: 10/14/2024 13:27

Molybdenum	0.06	0.01	mg/L	0.0625		102	85-115			
Antimony	0.066	0.005	mg/L	0.0625		106	85-115			
Arsenic	0.0656	0.0010	mg/L	0.0625		105	85-115			
Barium	0.063	0.004	mg/L	0.0625		101	85-115			
Beryllium	0.0669	0.0020	mg/L	0.0625		107	85-115			
Cadmium	0.0654	0.0010	mg/L	0.0625		105	85-115			
Chromium	0.0632	0.0020	mg/L	0.0625		101	85-115			
Cobalt	0.063	0.004	mg/L	0.0625		102	85-115			
Copper	0.064	0.003	mg/L	0.0625		102	85-115			
Lead	0.064	0.002	mg/L	0.0625		102	85-115			
Lithium	0.06	0.02	mg/L	0.0625		102	85-115			
Nickel	0.063	0.003	mg/L	0.0625		101	85-115			
Selenium	0.069	0.003	mg/L	0.0625		110	85-115			
Thallium	0.0640	0.0020	mg/L	0.0625		102	85-115			
Zinc	0.07	0.02	mg/L	0.0625		114	85-115			

Matrix Spike (BDJ0402-MS1)

Source: 4101343-13

Prepared: 10/3/2024 11:20, Analyzed: 10/12/2024 1:44

Boron	1.33	1.00	mg/L	0.125	1.00	NR	80-120			D2, M2
Calcium	508	5.00	mg/L	6.25	475	532	80-120			D2, M3
Iron	12.6	1.00	mg/L	6.25	5.95	107	80-120			D2
Magnesium	215	2.00	mg/L	6.25	222	NR	80-120			D2, M3
Potassium	14.6	5.00	mg/L	6.25	7.71	110	80-120			D2
Sodium	43.5	2.60	mg/L	6.25	35.9	121	80-120			D2, M1



Metals by SW846 6000 Series Methods Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDJ0402 - EPA 200.2

Matrix Spike (BDJ0402-MS2)

Source: 4101343-13

Prepared: 10/3/2024 11:20, Analyzed: 10/12/2024 1:51

Boron	1.22	1.00	mg/L		1.00		80-120			D2
Calcium	535	5.00	mg/L		475		80-120			D2, M3
Iron	6.67	1.00	mg/L		5.95		80-120			D2
Magnesium	223	2.00	mg/L		222		80-120			D2, M3
Potassium	8.52	5.00	mg/L		7.71		80-120			D2
Sodium	39.8	2.60	mg/L		35.9		80-120			D2

Matrix Spike (BDJ0402-MS3)

Source: 4101343-13

Prepared: 10/3/2024 11:20, Analyzed: 10/14/2024 14:14

Antimony	0.061	0.005	mg/L	0.0625	ND	98.2	80-120			
Molybdenum	0.07	0.01	mg/L	0.0625	0.007	103	80-120			
Arsenic	0.0710	0.0010	mg/L	0.0625	0.0049	106	80-120			
Barium	0.068	0.004	mg/L	0.0625	0.011	92.5	80-120			
Beryllium	0.0533	0.0020	mg/L	0.0625	ND	85.2	80-120			
Cadmium	0.0548	0.0010	mg/L	0.0625	ND	87.6	80-120			
Chromium	0.0634	0.0020	mg/L	0.0625	ND	101	80-120			
Cobalt	0.069	0.004	mg/L	0.0625	0.007	99.3	80-120			
Copper	0.059	0.003	mg/L	0.0625	ND	94.2	80-120			
Lead	0.056	0.002	mg/L	0.0625	ND	90.3	80-120			
Lithium	0.09	0.02	mg/L	0.0625	0.04	90.2	80-120			
Nickel	0.073	0.003	mg/L	0.0625	0.013	95.4	80-120			
Selenium	0.059	0.003	mg/L	0.0625	ND	94.5	80-120			
Thallium	0.0571	0.0020	mg/L	0.0625	ND	91.4	80-120			
Zinc	0.07	0.02	mg/L	0.0625	0.009	90.1	80-120			

Matrix Spike Dup (BDJ0402-MSD1)

Source: 4101343-13

Prepared: 10/3/2024 11:20, Analyzed: 10/12/2024 1:47

Boron	1.28	1.00	mg/L	0.125	1.00	NR	80-120	3.15	20	D2, M2
Calcium	500	5.00	mg/L	6.25	475	399	80-120	1.64	20	D2, M3
Iron	12.6	1.00	mg/L	6.25	5.95	106	80-120	0.426	20	D2
Magnesium	213	2.00	mg/L	6.25	222	NR	80-120	0.737	20	D2, M3
Potassium	14.4	5.00	mg/L	6.25	7.71	108	80-120	0.776	20	D2
Sodium	42.8	2.60	mg/L	6.25	35.9	111	80-120	1.52	20	D2



Metals by SW846 6000 Series Methods Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDJ0402 - EPA 200.2

Matrix Spike Dup (BDJ0402-MSD2)

Source: 4101343-13

Prepared: 10/3/2024 11:20, Analyzed: 10/14/2024 14:18

Molybdenum	0.07	0.01	mg/L	0.0625	0.007	103	80-120	0.0506	20	
Antimony	0.065	0.005	mg/L	0.0625	ND	104	80-120	5.57	20	
Arsenic	0.0689	0.0010	mg/L	0.0625	0.0049	102	80-120	2.93	20	
Barium	0.072	0.004	mg/L	0.0625	0.011	97.8	80-120	4.77	20	
Beryllium	0.0561	0.0020	mg/L	0.0625	ND	89.7	80-120	5.09	20	
Cadmium	0.0576	0.0010	mg/L	0.0625	ND	92.1	80-120	5.00	20	
Chromium	0.0624	0.0020	mg/L	0.0625	ND	99.8	80-120	1.68	20	
Cobalt	0.068	0.004	mg/L	0.0625	0.007	97.4	80-120	1.77	20	
Copper	0.058	0.003	mg/L	0.0625	ND	92.7	80-120	1.61	20	
Lead	0.059	0.002	mg/L	0.0625	ND	94.5	80-120	4.57	20	
Lithium	0.10	0.02	mg/L	0.0625	0.04	99.1	80-120	5.83	20	
Nickel	0.071	0.003	mg/L	0.0625	0.013	92.8	80-120	2.18	20	
Selenium	0.058	0.003	mg/L	0.0625	ND	92.6	80-120	2.05	20	
Thallium	0.0603	0.0020	mg/L	0.0625	ND	96.4	80-120	5.39	20	
Zinc	0.07	0.02	mg/L	0.0625	0.009	91.8	80-120	1.54	20	

Post Spike (BDJ0402-PS1)

Source: 4101343-13

Prepared: 10/3/2024 11:20, Analyzed: 10/12/2024 1:54

Boron	1280		ug/L	125	996	224	75-125			D2, M2
Calcium	515000		ug/L	6250	475000	635	75-125			M3, D2
Iron	12900		ug/L	6250	5950	112	75-125			D2
Magnesium	219000		ug/L	6250	222000	NR	75-125			D2, M3
Potassium	14900		ug/L	6250	7710	114	75-125			D2
Sodium	44100		ug/L	6250	35900	131	75-125			D2, M1

Post Spike (BDJ0402-PS2)

Source: 4101343-13

Prepared: 10/3/2024 11:20, Analyzed: 10/14/2024 14:22

Antimony	65.5		ug/L	62.5	0.160	105	75-125			
Molybdenum	73.4		ug/L	62.5	6.86	106	75-125			
Arsenic	71.1		ug/L	62.5	4.93	106	75-125			
Barium	73.4		ug/L	62.5	10.5	101	75-125			
Beryllium	58.0		ug/L	62.5	0.0214	92.8	75-125			
Cadmium	58.8		ug/L	62.5	0.0173	94.0	75-125			
Chromium	63.1		ug/L	62.5	0.347	100	75-125			
Cobalt	68.7		ug/L	62.5	6.87	98.9	75-125			
Copper	59.2		ug/L	62.5	0.767	93.5	75-125			
Lead	61.7		ug/L	62.5	0.047	98.7	75-115			
Lithium	104		ug/L	62.5	36.6	108	75-125			
Nickel	73.1		ug/L	62.5	13.4	95.6	75-125			
Selenium	58.5		ug/L	62.5	0.130	93.4	75-125			
Thallium	63.2		ug/L	62.5	0.0308	101	75-125			
Zinc	68.2		ug/L	62.5	9.34	94.1	75-125			



Metals by SW846 6000 Series Methods Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDJ2837 - EPA 200.2

Blank (BDJ2837-BLK1)

Prepared: 10/25/2024 9:37, Analyzed: 10/25/2024 13:08

Boron	ND	0.10	mg/L							U
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LCS (BDJ2837-BS1)

Prepared: 10/25/2024 9:37, Analyzed: 10/25/2024 13:11

Boron	0.13	0.10	mg/L	0.125		103	85-115			
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Matrix Spike (BDJ2837-MS1) Source: 4101343-33RE1

Prepared: 10/25/2024 9:37, Analyzed: 10/25/2024 13:17

Boron	0.27	0.10	mg/L	0.125	0.13	108	80-120			
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Matrix Spike Dup (BDJ2837-MSD1) Source: 4101343-33RE1

Prepared: 10/25/2024 9:37, Analyzed: 10/25/2024 13:20

Boron	0.26	0.10	mg/L	0.125	0.13	104	80-120	1.78	20	
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Post Spike (BDJ2837-PS1) Source: 4101343-33RE1

Prepared: 10/25/2024 9:37, Analyzed: 10/25/2024 13:24

Boron	262		ug/L	125	133	104	75-125			
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Metals by EPA 200 Series Methods Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
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Batch BDJ0535 - Default Prep Metals

Blank (BDJ0535-BLK1)

Prepared: 10/4/2024 8:33, Analyzed: 10/4/2024 11:19

Mercury	ND	5.0	ng/L						U
Mercury	ND	5.0	ng/L						U

Blank (BDJ0535-BLK2)

Prepared: 10/4/2024 8:33, Analyzed: 10/4/2024 11:25

Mercury	ND	5.0	ng/L						U
Mercury	ND	5.0	ng/L						U

Blank (BDJ0535-BLK3)

Prepared: 10/4/2024 8:33, Analyzed: 10/4/2024 11:30

Mercury	ND	5.0	ng/L						U
Mercury	ND	5.0	ng/L						U

LCS (BDJ0535-BS1)

Prepared: 10/4/2024 8:33, Analyzed: 10/4/2024 11:36

Mercury	51.8	5.0	ng/L	50.0		104	76-113		
Mercury	51.8	5.0	ng/L	50.0		104	76-113		

Matrix Spike (BDJ0535-MS1)

Source: 4092695-01

Prepared: 10/4/2024 8:33, Analyzed: 10/4/2024 14:34

Mercury	39.4	5.0	ng/L	50.0	ND	78.8	63-111		
Mercury	39.4	5.0	ng/L	50.0	ND	78.8	63-111		

Matrix Spike (BDJ0535-MS2)

Source: 4101343-13

Prepared: 10/4/2024 8:33, Analyzed: 10/4/2024 14:45

Mercury	29.4	5.0	ng/L	50.0	ND	58.8	63-111		M2
Mercury	29.4	5.0	ng/L	50.0	ND	58.8	63-111		M2

Matrix Spike Dup (BDJ0535-MSD1)

Source: 4092695-01

Prepared: 10/4/2024 8:33, Analyzed: 10/4/2024 14:39

Mercury	47.3	5.0	ng/L	50.0	ND	94.7	63-111	18.3	18	Y5
Mercury	47.3	5.0	ng/L	50.0	ND	94.7	63-111	18.3	18	Y5

Matrix Spike Dup (BDJ0535-MSD2)

Source: 4101343-13

Prepared: 10/4/2024 8:33, Analyzed: 10/4/2024 14:51

Mercury	29.8	5.0	ng/L	50.0	ND	59.5	63-111	1.11	18	M2
Mercury	29.8	5.0	ng/L	50.0	ND	59.5	63-111	1.11	18	M2



Metals by EPA 200 Series Methods Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
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Batch BDJ0720 - Default Prep Metals

Blank (BDJ0720-BLK1)

Prepared: 10/7/2024 8:52, Analyzed: 10/7/2024 11:11

Mercury	ND	5.0	ng/L						U
Mercury	ND	5.0	ng/L						U

Blank (BDJ0720-BLK2)

Prepared: 10/7/2024 8:52, Analyzed: 10/7/2024 11:17

Mercury	ND	5.0	ng/L						U
Mercury	ND	5.0	ng/L						U

Blank (BDJ0720-BLK3)

Prepared: 10/7/2024 8:52, Analyzed: 10/7/2024 11:22

Mercury	ND	5.0	ng/L						U
Mercury	ND	5.0	ng/L						U

LCS (BDJ0720-BS1)

Prepared: 10/7/2024 8:52, Analyzed: 10/7/2024 11:28

Mercury	52.1	5.0	ng/L	50.0		104	76-113		
Mercury	52.1	5.0	ng/L	50.0		104	76-113		

Matrix Spike (BDJ0720-MS1)

Source: 4101343-21

Prepared: 10/7/2024 8:52, Analyzed: 10/7/2024 15:21

Mercury	52.1	5.0	ng/L	50.0	13.7	76.7	63-111		
Mercury	52.1	5.0	ng/L	50.0	13.7	76.7	63-111		

Matrix Spike (BDJ0720-MS2)

Source: 4101343-23

Prepared: 10/7/2024 8:52, Analyzed: 10/7/2024 15:33

Mercury	51.4	5.0	ng/L	50.0	ND	103	63-111		
Mercury	51.4	5.0	ng/L	50.0	ND	103	63-111		

Matrix Spike Dup (BDJ0720-MSD1)

Source: 4101343-21

Prepared: 10/7/2024 8:52, Analyzed: 10/7/2024 15:27

Mercury	53.6	5.0	ng/L	50.0	13.7	79.8	63-111	2.97	18
Mercury	53.6	5.0	ng/L	50.0	13.7	79.8	63-111	2.97	18

Matrix Spike Dup (BDJ0720-MSD2)

Source: 4101343-23

Prepared: 10/7/2024 8:52, Analyzed: 10/7/2024 15:38

Mercury	49.5	5.0	ng/L	50.0	ND	99.0	63-111	3.68	18
Mercury	49.5	5.0	ng/L	50.0	ND	99.0	63-111	3.68	18



Metals by EPA 200 Series Methods Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
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Batch BDJ0877 - Default Prep Metals

Blank (BDJ0877-BLK1)

Prepared: 10/8/2024 8:12, Analyzed: 10/8/2024 11:12

Mercury	ND	5.0	ng/L						U
Mercury	ND	5.0	ng/L						U

Blank (BDJ0877-BLK2)

Prepared: 10/8/2024 8:12, Analyzed: 10/8/2024 11:18

Mercury	ND	5.0	ng/L						U
Mercury	ND	5.0	ng/L						U

Blank (BDJ0877-BLK3)

Prepared: 10/8/2024 8:12, Analyzed: 10/8/2024 11:23

Mercury	ND	5.0	ng/L						U
Mercury	ND	5.0	ng/L						U

LCS (BDJ0877-BS1)

Prepared: 10/8/2024 8:12, Analyzed: 10/8/2024 11:29

Mercury	53.0	5.0	ng/L	50.0		106	76-113		
Mercury	53.0	5.0	ng/L	50.0		106	76-113		

Matrix Spike (BDJ0877-MS1)

Source: 4092979-01

Prepared: 10/8/2024 8:12, Analyzed: 10/8/2024 14:06

Mercury	50.3	5.0	ng/L	50.0	75.0	NR	63-111		M2
Mercury	50.3	5.0	ng/L	50.0	75.0	NR	63-111		M2

Matrix Spike (BDJ0877-MS2)

Source: 4100870-01

Prepared: 10/8/2024 8:12, Analyzed: 10/8/2024 14:17

Mercury	5.6	5.0	ng/L	50.0	ND	11.3	63-111		M2
Mercury	5.6	5.0	ng/L	50.0	ND	11.3	63-111		M2

Matrix Spike Dup (BDJ0877-MSD1)

Source: 4092979-01

Prepared: 10/8/2024 8:12, Analyzed: 10/8/2024 14:12

Mercury	53.9	5.0	ng/L	50.0	75.0	NR	63-111	6.78	18	M2
Mercury	53.9	5.0	ng/L	50.0	75.0	NR	63-111	6.78	18	M2

Matrix Spike Dup (BDJ0877-MSD2)

Source: 4100870-01

Prepared: 10/8/2024 8:12, Analyzed: 10/8/2024 14:23

Mercury	6.9	5.0	ng/L	50.0	ND	13.9	63-111	20.5	18	M2, Y2
Mercury	6.9	5.0	ng/L	50.0	ND	13.9	63-111	20.5	18	M2, Y2



Metals by EPA 200 Series Methods Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDJ1020 - Default Prep Metals

Blank (BDJ1020-BLK1)

Prepared: 10/9/2024 8:20, Analyzed: 10/9/2024 15:29

Mercury	ND	5.0	ng/L							U
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Blank (BDJ1020-BLK2)

Prepared: 10/9/2024 8:20, Analyzed: 10/9/2024 15:34

Mercury	ND	5.0	ng/L							U
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Blank (BDJ1020-BLK3)

Prepared: 10/9/2024 8:20, Analyzed: 10/9/2024 15:40

Mercury	ND	5.0	ng/L							U
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LCS (BDJ1020-BS1)

Prepared: 10/9/2024 8:20, Analyzed: 10/9/2024 15:46

Mercury	53.8	5.0	ng/L	50.0		108	76-113			
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Matrix Spike (BDJ1020-MS1)

Source: 4103212-01

Prepared: 10/9/2024 8:20, Analyzed: 10/9/2024 18:07

Mercury	3.2	5.0	ng/L	50.0	ND	6.33	63-111			M2, J
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Matrix Spike (BDJ1020-MS2)

Source: 4103213-01

Prepared: 10/9/2024 8:20, Analyzed: 10/9/2024 18:18

Mercury	43.4	5.0	ng/L	50.0	ND	86.9	63-111			
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Matrix Spike Dup (BDJ1020-MSD1)

Source: 4103212-01

Prepared: 10/9/2024 8:20, Analyzed: 10/9/2024 18:13

Mercury	ND	5.0	ng/L	50.0	ND		63-111		18	M2, U
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Matrix Spike Dup (BDJ1020-MSD2)

Source: 4103213-01

Prepared: 10/9/2024 8:20, Analyzed: 10/9/2024 18:24

Mercury	41.4	5.0	ng/L	50.0	ND	82.9	63-111	4.74	18	
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Conventional Chemistry Analyses Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BDJ0108 - Default Prep Micro										
Blank (BDJ0108-BLK1)										
Prepared: 10/4/2024 11:24, Analyzed: 10/4/2024 11:49										
Specific Conductance (Lab)	ND	1	uS/cm @ 25.0 °C							U
LCS (BDJ0108-BS1)										
Prepared: 10/4/2024 11:24, Analyzed: 10/4/2024 11:49										
Specific Conductance (Lab)	1400		uS/cm @ 25.0 °C	1410		99.4	80-120			
Duplicate (BDJ0108-DUP1) Source: 4101343-13										
Prepared: 10/4/2024 11:24, Analyzed: 10/4/2024 11:49										
Specific Conductance (Lab)	3170	1	uS/cm @ 25.0 °C		3140			0.951	0.938	Y1
Duplicate (BDJ0108-DUP2) Source: 4101343-31										
Prepared: 10/4/2024 11:24, Analyzed: 10/4/2024 11:49										
Specific Conductance (Lab)	3510	1	uS/cm @ 25.0 °C		3490			0.571	0.938	
Batch BDJ0393 - Default Prep Wet Chem										
Blank (BDJ0393-BLK1)										
Prepared: 10/3/2024 10:30, Analyzed: 10/4/2024 4:54										
Total Organic Carbon	ND	0.5	mg/L							U
LCS (BDJ0393-BS1)										
Prepared: 10/3/2024 10:30, Analyzed: 10/4/2024 5:16										
Total Organic Carbon	5.0	0.5	mg/L	5.00		99.8	80-120			
Duplicate (BDJ0393-DUP1) Source: 4101343-13										
Prepared: 10/3/2024 10:30, Analyzed: 10/4/2024 10:35										
Total Organic Carbon	1.7	0.5	mg/L		1.8			5.80	25	
Duplicate (BDJ0393-DUP2) Source: 4101343-41										
Prepared: 10/3/2024 10:30, Analyzed: 10/4/2024 15:54										
Total Organic Carbon	0.8	0.5	mg/L		0.8			3.46	25	
Matrix Spike (BDJ0393-MS1) Source: 4101343-13										
Prepared: 10/3/2024 10:30, Analyzed: 10/4/2024 10:56										
Total Organic Carbon	4.1	0.5	mg/L	2.50	1.8	91.8	80-120			



Conventional Chemistry Analyses Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDJ0393 - Default Prep Wet Chem

Matrix Spike (BDJ0393-MS2)

Source: 4101343-43

Prepared: 10/3/2024 10:30, Analyzed: 10/4/2024 16:16

Total Organic Carbon	5.0	0.5	mg/L	5.00	0.2	100	80-120			
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Batch BDJ0560 - Default Prep Wet Chem

Blank (BDJ0560-BLK1)

Prepared: 10/4/2024 17:11, Analyzed: 10/4/2024 17:11

Total Dissolved Solids	ND	25	mg/L							U
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LCS (BDJ0560-BS1)

Prepared: 10/4/2024 17:11, Analyzed: 10/4/2024 17:11

Total Dissolved Solids	88		mg/L	90.0		97.8	80-120			
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Duplicate (BDJ0560-DUP1)

Source: 4071649-01

Prepared: 10/4/2024 17:11, Analyzed: 10/4/2024 17:11

Total Dissolved Solids	222	50	mg/L		226			1.79	10	
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Duplicate (BDJ0560-DUP2)

Source: 4101343-13

Prepared: 10/4/2024 17:11, Analyzed: 10/4/2024 17:11

Total Dissolved Solids	2620	250	mg/L		2640			0.760	10	
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Batch BDJ0561 - Default Prep Wet Chem

Blank (BDJ0561-BLK1)

Prepared: 10/4/2024 17:55, Analyzed: 10/4/2024 17:55

Total Dissolved Solids	ND	25	mg/L							U
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LCS (BDJ0561-BS1)

Prepared: 10/4/2024 17:55, Analyzed: 10/4/2024 17:55

Total Dissolved Solids	88		mg/L	90.0		97.8	80-120			
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Duplicate (BDJ0561-DUP1)

Source: 4072271-01

Prepared: 10/4/2024 17:55, Analyzed: 10/4/2024 17:55

Total Dissolved Solids	358	50	mg/L		344			3.99	10	
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Conventional Chemistry Analyses Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDJ0561 - Default Prep Wet Chem

Duplicate (BDJ0561-DUP2)

Source: 4103026-01

Prepared: 10/4/2024 17:55, Analyzed: 10/4/2024 17:55

Total Dissolved Solids	536	50	mg/L		532			0.749	10	
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Batch BDJ0571 - Default Prep Wet Chem

Blank (BDJ0571-BLK1)

Prepared: 10/4/2024 11:35, Analyzed: 10/4/2024 11:35

Total Alkalinity	ND	4	mg/L							U
Bicarbonate Alkalinity as CaCO ₃	ND	4	mg/L							U
Carbonate Alkalinity as CaCO ₃	ND	4	mg/L							U

Blank (BDJ0571-BLK2)

Prepared: 10/4/2024 13:03, Analyzed: 10/4/2024 13:03

Carbonate Alkalinity as CaCO ₃	ND	4	mg/L							U
Bicarbonate Alkalinity as CaCO ₃	ND	4	mg/L							U
Total Alkalinity	ND	4	mg/L							U

Blank (BDJ0571-BLK3)

Prepared: 10/4/2024 14:27, Analyzed: 10/4/2024 14:27

Carbonate Alkalinity as CaCO ₃	ND	4	mg/L							U
Total Alkalinity	ND	4	mg/L							U
Bicarbonate Alkalinity as CaCO ₃	ND	4	mg/L							U

LCS (BDJ0571-BS1)

Prepared: 10/4/2024 12:58, Analyzed: 10/4/2024 12:58

Bicarbonate Alkalinity as CaCO ₃	239	4	mg/L	5.80		NR	0-200			
Total Alkalinity	249	4	mg/L	250		99.7	80-120			
Carbonate Alkalinity as CaCO ₃	7	4	mg/L	242		2.81	0-200			

LCS (BDJ0571-BS2)

Prepared: 10/4/2024 14:22, Analyzed: 10/4/2024 14:22

Total Alkalinity	252	4	mg/L	250		101	80-120			
Carbonate Alkalinity as CaCO ₃	8	4	mg/L	242		3.39	0-200			
Bicarbonate Alkalinity as CaCO ₃	243	4	mg/L	5.80		NR	0-200			



Conventional Chemistry Analyses Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDJ0571 - Default Prep Wet Chem

Duplicate (BDJ0571-DUP1)

Source: 4101343-13

Prepared: 10/4/2024 12:43, Analyzed: 10/4/2024 12:43

Carbonate Alkalinity as CaCO ₃	ND	4	mg/L		ND				10	U
Total Alkalinity	507	4	mg/L		505			0.435	10	
Bicarbonate Alkalinity as CaCO ₃	507	4	mg/L		505			0.435	10	

Duplicate (BDJ0571-DUP2)

Source: 4101343-37

Prepared: 10/4/2024 14:10, Analyzed: 10/4/2024 14:10

Total Alkalinity	322	4	mg/L		322			0.0620	10	
Carbonate Alkalinity as CaCO ₃	ND	4	mg/L		ND				10	U
Bicarbonate Alkalinity as CaCO ₃	322	4	mg/L		322			0.0620	10	

Matrix Spike (BDJ0571-MS1)

Source: 4101343-13

Prepared: 10/4/2024 12:50, Analyzed: 10/4/2024 12:50

Total Alkalinity	499	4	mg/L	50.0	505	NR	80-120			M3
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Matrix Spike (BDJ0571-MS2)

Source: 4101343-37

Prepared: 10/4/2024 14:16, Analyzed: 10/4/2024 14:16

Total Alkalinity	339	4	mg/L	50.0	322	32.6	80-120			M3
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Batch BDJ0572 - Default Prep Micro

Blank (BDJ0572-BLK1)

Prepared: 10/4/2024 11:32, Analyzed: 10/4/2024 11:49

Specific Conductance (Lab)	ND	1	uS/cm @ 25.0 °C							U
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LCS (BDJ0572-BS1)

Prepared: 10/4/2024 11:32, Analyzed: 10/4/2024 11:49

Specific Conductance (Lab)	1410		uS/cm @ 25.0 °C	1410		99.7	80-120			
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Duplicate (BDJ0572-DUP1)

Source: 4092948-03

Prepared: 10/4/2024 11:32, Analyzed: 10/4/2024 11:49

Specific Conductance (Lab)	26000	10	uS/cm @ 25.0 °C		26000			0.0384	0.938	D
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Duplicate (BDJ0572-DUP2)

Source: 4102917-02

Prepared: 10/4/2024 11:32, Analyzed: 10/4/2024 11:49

Specific Conductance (Lab)	39	1	uS/cm @ 25.0 °C		39			0.00	0.938	
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Conventional Chemistry Analyses Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
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Batch BDJ0590 - Default Prep Wet Chem

Blank (BDJ0590-BLK1)

Prepared: 10/4/2024 15:50, Analyzed: 10/4/2024 15:50

Total Alkalinity	ND	4	mg/L						U
Carbonate Alkalinity as CaCO ₃	ND	4	mg/L						U
Bicarbonate Alkalinity as CaCO ₃	ND	4	mg/L						U

Blank (BDJ0590-BLK2)

Prepared: 10/4/2024 16:32, Analyzed: 10/4/2024 16:32

Total Alkalinity	ND	4	mg/L						U
Carbonate Alkalinity as CaCO ₃	ND	4	mg/L						U
Bicarbonate Alkalinity as CaCO ₃	ND	4	mg/L						U

Blank (BDJ0590-BLK3)

Prepared: 10/4/2024 17:09, Analyzed: 10/4/2024 17:09

Total Alkalinity	ND	4	mg/L						U
Carbonate Alkalinity as CaCO ₃	ND	4	mg/L						U
Bicarbonate Alkalinity as CaCO ₃	ND	4	mg/L						U

LCS (BDJ0590-BS1)

Prepared: 10/4/2024 16:27, Analyzed: 10/4/2024 16:27

Bicarbonate Alkalinity as CaCO ₃	242	4	mg/L	5.80		NR	0-200		
Carbonate Alkalinity as CaCO ₃	9	4	mg/L	242		3.55	0-200		
Total Alkalinity	251	4	mg/L	250		100	80-120		

Duplicate (BDJ0590-DUP1)

Source: 4101343-41

Prepared: 10/4/2024 16:16, Analyzed: 10/4/2024 16:16

Carbonate Alkalinity as CaCO ₃	ND	4	mg/L		ND			10	U
Bicarbonate Alkalinity as CaCO ₃	320	4	mg/L		328		2.62	10	
Total Alkalinity	320	4	mg/L		328		2.62	10	

Matrix Spike (BDJ0590-MS1)

Source: 4101343-41

Prepared: 10/4/2024 16:21, Analyzed: 10/4/2024 16:21

Total Alkalinity	335	4	mg/L	50.0	328	13.0	80-120		M3
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Conventional Chemistry Analyses Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDJ0893 - Default Prep Wet Chem

Blank (BDJ0893-BLK1)

Prepared: 10/8/2024 9:30, Analyzed: 10/8/2024 16:43

Chemical Oxygen Demand	ND	13	mg/L							U
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LCS (BDJ0893-BS1)

Prepared: 10/8/2024 9:30, Analyzed: 10/8/2024 16:43

Chemical Oxygen Demand	124	13	mg/L	125		99.2	90-110			
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Duplicate (BDJ0893-DUP1)

Source: 4101343-13

Prepared: 10/8/2024 9:30, Analyzed: 10/8/2024 16:43

Chemical Oxygen Demand	9	13	mg/L		9			0.00	25	J
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Matrix Spike (BDJ0893-MS1)

Source: 4101343-13

Prepared: 10/8/2024 9:30, Analyzed: 10/8/2024 16:43

Chemical Oxygen Demand	267	13	mg/L	250	9	103	90-110			
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Matrix Spike Dup (BDJ0893-MSD1)

Source: 4101343-13

Prepared: 10/8/2024 9:30, Analyzed: 10/8/2024 16:43

Chemical Oxygen Demand	267	13	mg/L	250	9	103	90-110	0.00	10	
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Batch BDJ0894 - Default Prep Wet Chem

Blank (BDJ0894-BLK1)

Prepared: 10/8/2024 9:35, Analyzed: 10/8/2024 16:43

Chemical Oxygen Demand	ND	13	mg/L							U
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LCS (BDJ0894-BS1)

Prepared: 10/8/2024 9:35, Analyzed: 10/8/2024 16:43

Chemical Oxygen Demand	125	13	mg/L	125		100	90-110			
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Duplicate (BDJ0894-DUP1)

Source: 4070065-01

Prepared: 10/8/2024 9:35, Analyzed: 10/8/2024 16:43

Chemical Oxygen Demand	45	13	mg/L		48			6.45	25	
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Matrix Spike (BDJ0894-MS1)

Source: 4070065-01

Prepared: 10/8/2024 9:35, Analyzed: 10/8/2024 16:43

Chemical Oxygen Demand	299	13	mg/L	250	48	100	90-110			
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Conventional Chemistry Analyses Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDJ0894 - Default Prep Wet Chem

Matrix Spike Dup (BDJ0894-MSD1)

Source: 4070065-01

Prepared: 10/8/2024 9:35, Analyzed: 10/8/2024 16:43

Chemical Oxygen Demand	300	13	mg/L	250	48	101	90-110	0.334	10	
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Batch BDJ2361 - Default Prep Wet Chem

Blank (BDJ2361-BLK1)

Prepared: 10/21/2024 18:44, Analyzed: 10/21/2024 18:44

Total Dissolved Solids	ND	25	mg/L							U
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LCS (BDJ2361-BS1)

Prepared: 10/21/2024 18:44, Analyzed: 10/21/2024 18:44

Total Dissolved Solids	88		mg/L	90.0		97.8	80-120			
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Duplicate (BDJ2361-DUP1)

Source: 4102017-01

Prepared: 10/21/2024 18:44, Analyzed: 10/21/2024 18:44

Total Dissolved Solids	193	25	mg/L		194			0.517	10	
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Ion Chromatography Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDJ0806 - Default Prep IC

Blank (BDJ0806-BLK1)

Prepared: 10/9/2024 2:44, Analyzed: 10/9/2024 2:44

Chloride	ND	0.5	mg/L							U
Fluoride	ND	0.20	mg/L							U
Sulfate	ND	1.0	mg/L							U

LCS (BDJ0806-BS1)

Prepared: 10/9/2024 2:19, Analyzed: 10/9/2024 2:19

Chloride	11.9		mg/L	12.5		95.0	90-110			
Sulfate	23.3		mg/L	25.0		93.0	90-110			
Fluoride	4.82		mg/L	5.00		96.5	90-110			

Matrix Spike (BDJ0806-MS1)

Source: 4101343-05

Prepared: 10/8/2024 14:53, Analyzed: 10/8/2024 14:53

Chloride	703		mg/L	625	45.8	105	80-120			D
Fluoride	271		mg/L	250	0.23	108	80-120			D
Sulfate	1870		mg/L	1250	522	108	80-120			D

Matrix Spike (BDJ0806-MS2)

Source: 4101343-13

Prepared: 10/9/2024 1:28, Analyzed: 10/9/2024 1:28

Sulfate	2570		mg/L	1250	1350	97.7	80-120			D
Fluoride	236		mg/L	250	0.19	94.5	80-120			D
Chloride	641		mg/L	625	41.7	95.8	80-120			D

Matrix Spike Dup (BDJ0806-MSD1)

Source: 4101343-05

Prepared: 10/8/2024 15:18, Analyzed: 10/8/2024 15:18

Sulfate	1790		mg/L	1250	522	101	80-120	4.61	20	D
Chloride	665		mg/L	625	45.8	99.1	80-120	5.49	10	D
Fluoride	250		mg/L	250	0.23	99.7	80-120	8.43	20	D

Matrix Spike Dup (BDJ0806-MSD2)

Source: 4101343-13

Prepared: 10/9/2024 1:53, Analyzed: 10/9/2024 1:53

Sulfate	2580		mg/L	1250	1350	98.9	80-120	0.586	20	D
Fluoride	241		mg/L	250	0.19	96.4	80-120	1.97	20	D
Chloride	645		mg/L	625	41.7	96.6	80-120	0.746	10	D



Certified Analyses included in this Report

Analyte	Certifications
2320 B-2011 in Water	
Bicarbonate Alkalinity as CaCO ₃	KY Drinking Water Mdv (00030) TN Drinking Water (02819) VA NELAC MDV (460210)
Carbonate Alkalinity as CaCO ₃	KY Drinking Water Mdv (00030) TN Drinking Water (02819) VA NELAC MDV (460210)
Total Alkalinity	KY Drinking Water Mdv (00030) KY Wastewater Mdv (00030) TN Drinking Water (02819) VA NELAC MDV (460210) MS Drinking Water MADV
2510 B-2011 in Water	
Specific Conductance (Lab)	KY Drinking Water Mdv (00030) VA NELAC MDV (460210) TN Drinking Water (02819) WV Wastewater Madisonville (241), 825 Industrial Rd Madisonville, KY 42431 FL Drinking Water Mdv (E871159)
2540 C-2015 in Water	
Total Dissolved Solids	KY Drinking Water Mdv (00030) VA NELAC MDV (460210) KY Wastewater Mdv (00030) TN Drinking Water (02819) WV Wastewater Madisonville (241), 825 Industrial Rd Madisonville, KY 42431 MS Drinking Water MADV
5310 C-2014 in Water	
Total Organic Carbon	KY Drinking Water Mdv (00030) VA NELAC MDV (460210) KY Wastewater Mdv (00030) TN Drinking Water (02819) ADEM Drinking Water Mdv (41880) WV Wastewater Madisonville (241), 825 Industrial Rd Madisonville, KY 42431 MS Drinking Water MADV
EPA 245.7 REV 2 in Water	
Mercury	VA NELAC MDV (460210) KY Wastewater Mdv (00030)
Mercury	VA NELAC MDV (460210) KY Wastewater Mdv (00030) WV Wastewater Madisonville (241), 825 Industrial Rd Madisonville, KY 42431
EPA 300.0 REV 2.1 in Water	
Chloride	KY Drinking Water Mdv (00030) KY Wastewater Mdv (00030) TN Drinking Water (02819) WV Wastewater Madisonville (241), 825 Industrial Rd Madisonville, KY 42431 MS Drinking Water MADV VA NELAC MDV (460210)
Fluoride	KY Drinking Water Mdv (00030) IN Drinking Water Mdv (C-KY-02) KY Wastewater Mdv (00030) WV Drinking Water Mdv (9959 M) TN Drinking Water (02819) ADEM Drinking Water Mdv (41880) WV Wastewater Madisonville (241), 825 Industrial Rd Madisonville, KY 42431 VA NELAC MDV (460210) MS Drinking Water MADV
Sulfate	KY Drinking Water Mdv (00030) VA NELAC MDV (460210) KY Wastewater Mdv (00030) TN Drinking Water (02819) WV Wastewater Madisonville (241), 825 Industrial Rd Madisonville, KY 42431
HACH 8000 in Water	
Chemical Oxygen Demand	KY Wastewater Mdv (00030) VA NELAC MDV (460210) WV Wastewater Madisonville (241), 825 Industrial Rd Madisonville, KY 42431
SW846 6010 B in Water	
Calcium	VA NELAC MDV (460210)

Sample Acceptance Checklist for Work Order 4101343

Shipped By: Client

Temperature: 4.30° Celcius

Condition

Check if Custody Seals are Present/Intact	☐
Check if Custody Signatures are Present	☒
Check if Collector Signature Present	☒
Check if bottles are intact	☒
Check if bottles are correct	☒
Check if bottles have sufficient volume	☒
Check if samples received on ice	☒
Check if VOA headspace is acceptable	☐
Check if samples received in holding time.	☒
Check if samples are preserved properly	☒



October 24, 2024

Rob Whittington
Pace Analytical Madisonville
825 Industrial Rd
Madisonville, KY 42431

RE: Project: 4101343
Pace Project No.: 30723282

Dear Rob Whittington:

Enclosed are the analytical results for sample(s) received by the laboratory on October 03, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Greensburg

(Greensburg, PA) - Revision 1 - This report replaces the 10/21/2024 report. This project was revised on 10/24/2024 in order to add in sample ID's and add Rad QC sheets.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Theresa A. Wilson
theresa.wilson@pacelabs.com
(724)850-5600
Project Manager

Enclosures

cc: Mark Demoss, Pace Analytical Madisonville



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 4101343

Pace Project No.: 30723282

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

ANAB DOD-ELAP Rad Accreditation #: L2417

ANABISO/IEC 17025:2017 Rad Cert#: L24170

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 2950

Colorado Certification #: PA01547

Connecticut Certification #: PH-0694

EPA Region 4 DW Rad

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas Certification #: E-10358

Kentucky Certification #: KY90133

KY WW Permit #: KY0098221

KY WW Permit #: KY0000221

Louisiana DHH/TNI Certification #: LA010

Louisiana DEQ/TNI Certification #: 04086

Maine Certification #: 2023021

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification #: 9991

Missouri Certification #: 235

Montana Certification #: Cert0082

Nebraska Certification #: NE-OS-29-14

Nevada Certification #: PA014572023-03

New Hampshire/TNI Certification #: 297622

New Jersey/TNI Certification #: PA051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Ohio EPA Rad Approval: #41249

Oregon/TNI Certification #: PA200002-015

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: TN02867

Texas/TNI Certification #: T104704188-22-18

Utah/TNI Certification #: PA014572223-14

USDA Soil Permit #: 525-23-67-77263

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 460198

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Approve List for Rad

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 4101343

Pace Project No.: 30723282

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30723282001	4101343-01 MW1	Water	09/30/24 12:40	10/03/24 10:30
30723282002	4101343-03 MW2	Water	10/01/24 09:55	10/03/24 10:30
30723282003	4101343-05 MW3	Water	10/01/24 10:20	10/03/24 10:30
30723282004	4101343-07 MW4	Water	10/02/24 08:15	10/03/24 10:30
30723282005	4101343-09 MW4D	Water	10/01/24 10:55	10/03/24 10:30
30723282006	4101343-11 MW5	Water	10/01/24 08:05	10/03/24 10:30
30723282007	4101343-13 MW6	Water	09/30/24 14:55	10/03/24 10:30
30723282008	4101343-15 MW7	Water	10/01/24 08:00	10/03/24 10:30
30723282009	4101343-17 MW8	Water	09/30/24 13:27	10/03/24 10:30
30723282010	4101343-19 MW10	Water	09/30/24 15:25	10/03/24 10:30
30723282011	4101343-21 MW10D	Water	10/02/24 07:40	10/03/24 10:30
30723282012	4101343-23 MW102	Water	09/30/24 11:00	10/03/24 10:30
30723282013	4101343-25 MW104	Water	09/30/24 09:10	10/03/24 10:30
30723282014	4101343-27 MW105R	Water	09/30/24 07:08	10/03/24 10:30
30723282015	4101343-29 MW110	Water	09/30/24 07:30	10/03/24 10:30
30723282016	4101343-31 MW111	Water	09/30/24 10:35	10/03/24 10:30
30723282017	4101343-33 MW112	Water	10/02/24 07:10	10/03/24 10:30
30723282018	4101343-35 MW113	Water	10/02/24 07:35	10/03/24 10:30
30723282019	4101343-37 MW114	Water	10/02/24 09:55	10/03/24 10:30
30723282020	4101343-39 WELL DUP 1	Water	09/30/24 08:10	10/03/24 10:30
30723282021	4101343-41 WELL DUP 2	Water	10/01/24 10:57	10/03/24 10:30
30723282022	4101343-43 FIELD BLANK	Water	10/01/24 08:50	10/03/24 10:30

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 4101343
Pace Project No.: 30723282

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30723282001	4101343-01 MW1	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30723282002	4101343-03 MW2	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30723282003	4101343-05 MW3	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30723282004	4101343-07 MW4	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30723282005	4101343-09 MW4D	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30723282006	4101343-11 MW5	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30723282007	4101343-13 MW6	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30723282008	4101343-15 MW7	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30723282009	4101343-17 MW8	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30723282010	4101343-19 MW10	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30723282011	4101343-21 MW10D	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30723282012	4101343-23 MW102	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30723282013	4101343-25 MW104	EPA 903.1	LL1	1	PASI-PA

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 4101343
Pace Project No.: 30723282

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30723282014	4101343-27 MW105R	EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
30723282015	4101343-29 MW110	Total Radium Calculation	JAL	1	PASI-PA
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30723282016	4101343-31 MW111	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 903.1	LL1	1	PASI-PA
30723282017	4101343-33 MW112	EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
30723282018	4101343-35 MW113	Total Radium Calculation	JAL	1	PASI-PA
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30723282019	4101343-37 MW114	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 903.1	LL1	1	PASI-PA
30723282020	4101343-39 WELL DUP 1	EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
30723282021	4101343-41 WELL DUP 2	Total Radium Calculation	JAL	1	PASI-PA
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30723282022	4101343-43 FIELD BLANK	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 4101343
Pace Project No.: 30723282

Sample: 4101343-01 MW1 **Lab ID:** 30723282001 Collected: 09/30/24 12:40 Received: 10/03/24 10:30 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Samplers name and signature not listed on COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	-0.232 ± 0.683 (1.36) C:NA T:88%	pCi/L	10/16/24 14:11	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.345 ± 0.307 (0.615) C:86% T:83%	pCi/L	10/16/24 14:55	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.345 ± 0.990 (1.98)	pCi/L	10/21/24 09:48	7440-14-4	

Sample: 4101343-03 MW2 **Lab ID:** 30723282002 Collected: 10/01/24 09:55 Received: 10/03/24 10:30 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Samplers name and signature not listed on COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	-0.408 ± 0.550 (1.21) C:NA T:89%	pCi/L	10/16/24 14:11	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.633 ± 0.350 (0.622) C:85% T:89%	pCi/L	10/16/24 14:55	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.633 ± 0.900 (1.83)	pCi/L	10/21/24 09:48	7440-14-4	

Sample: 4101343-05 MW3 **Lab ID:** 30723282003 Collected: 10/01/24 10:20 Received: 10/03/24 10:30 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Samplers name and signature not listed on COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	-0.0662 ± 0.723 (1.41) C:NA T:87%	pCi/L	10/16/24 14:11	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.438 ± 0.390 (0.789) C:79% T:82%	pCi/L	10/16/24 14:55	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.438 ± 1.11 (2.20)	pCi/L	10/21/24 09:48	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 4101343
Pace Project No.: 30723282

Sample: 4101343-07 MW4 **Lab ID:** 30723282004 Collected: 10/02/24 08:15 Received: 10/03/24 10:30 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Samplers name and signature not listed on COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	-0.496 ± 0.474 (1.11) C:NA T:98%	pCi/L	10/16/24 14:11	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	1.00 ± 0.503 (0.897) C:81% T:86%	pCi/L	10/16/24 14:55	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.000 ± 0.977 (2.01)	pCi/L	10/21/24 09:48	7440-14-4	

Sample: 4101343-09 MW4D **Lab ID:** 30723282005 Collected: 10/01/24 10:55 Received: 10/03/24 10:30 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Samplers name and signature not listed on COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.541 ± 0.739 (1.25) C:NA T:86%	pCi/L	10/16/24 14:11	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	1.01 ± 0.514 (0.909) C:76% T:90%	pCi/L	10/16/24 14:56	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.55 ± 1.25 (2.16)	pCi/L	10/21/24 09:48	7440-14-4	

Sample: 4101343-11 MW5 **Lab ID:** 30723282006 Collected: 10/01/24 08:05 Received: 10/03/24 10:30 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Samplers name and signature not listed on COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	-0.228 ± 0.708 (1.40) C:NA T:88%	pCi/L	10/16/24 14:11	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	1.79 ± 0.619 (0.913) C:80% T:85%	pCi/L	10/16/24 14:56	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.79 ± 1.33 (2.31)	pCi/L	10/21/24 09:48	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 4101343
Pace Project No.: 30723282

Sample: 4101343-13 MW6 **Lab ID:** 30723282007 Collected: 09/30/24 14:55 Received: 10/03/24 10:30 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Samplers name and signature not listed on COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.110 ± 0.763 (1.40) C:NA T:91%	pCi/L	10/16/24 14:11	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.743 ± 0.449 (0.834) C:78% T:83%	pCi/L	10/16/24 14:56	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.853 ± 1.21 (2.23)	pCi/L	10/21/24 09:48	7440-14-4	

Sample: 4101343-15 MW7 **Lab ID:** 30723282008 Collected: 10/01/24 08:00 Received: 10/03/24 10:30 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Samplers name and signature not listed on COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	-0.112 ± 0.709 (1.37) C:NA T:90%	pCi/L	10/16/24 14:27	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.570 ± 0.367 (0.680) C:80% T:83%	pCi/L	10/16/24 14:56	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.570 ± 1.08 (2.05)	pCi/L	10/21/24 09:48	7440-14-4	

Sample: 4101343-17 MW8 **Lab ID:** 30723282009 Collected: 09/30/24 13:27 Received: 10/03/24 10:30 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Samplers name and signature not listed on COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.107 ± 0.645 (1.20) C:NA T:96%	pCi/L	10/16/24 14:27	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.193 ± 0.278 (0.595) C:82% T:88%	pCi/L	10/16/24 14:56	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.300 ± 0.923 (1.80)	pCi/L	10/21/24 09:48	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 4101343
Pace Project No.: 30723282

Sample: 4101343-19 MW10 **Lab ID:** 30723282010 Collected: 09/30/24 15:25 Received: 10/03/24 10:30 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Samplers name and signature not listed on COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.0567 ± 0.598 (1.14) C:NA T:95%	pCi/L	10/16/24 14:27	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.648 ± 0.415 (0.778) C:80% T:81%	pCi/L	10/16/24 14:56	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.705 ± 1.01 (1.92)	pCi/L	10/21/24 09:48	7440-14-4	

Sample: 4101343-21 MW10D **Lab ID:** 30723282011 Collected: 10/02/24 07:40 Received: 10/03/24 10:30 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Samplers name and signature not listed on COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.766 ± 0.727 (1.15) C:NA T:90%	pCi/L	10/16/24 14:27	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.982 ± 0.480 (0.819) C:74% T:81%	pCi/L	10/16/24 14:56	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.75 ± 1.21 (1.97)	pCi/L	10/21/24 09:48	7440-14-4	

Sample: 4101343-23 MW102 **Lab ID:** 30723282012 Collected: 09/30/24 11:00 Received: 10/03/24 10:30 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Samplers name and signature not listed on COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.108 ± 0.581 (1.09) C:NA T:90%	pCi/L	10/16/24 14:27	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.703 ± 0.531 (1.06) C:77% T:84%	pCi/L	10/16/24 14:56	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.811 ± 1.11 (2.15)	pCi/L	10/21/24 09:48	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 4101343
Pace Project No.: 30723282

Sample: 4101343-25 MW104 **Lab ID:** 30723282013 Collected: 09/30/24 09:10 Received: 10/03/24 10:30 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Samplers name and signature not listed on COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.422 ± 0.655 (1.12) C:NA T:94%	pCi/L	10/16/24 14:27	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	1.08 ± 0.555 (1.00) C:80% T:81%	pCi/L	10/16/24 14:56	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.50 ± 1.21 (2.12)	pCi/L	10/21/24 09:48	7440-14-4	

Sample: 4101343-27 MW105R **Lab ID:** 30723282014 Collected: 09/30/24 07:08 Received: 10/03/24 10:30 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Samplers name and signature not listed on COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.566 ± 0.755 (1.27) C:NA T:91%	pCi/L	10/16/24 14:27	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	1.76 ± 0.647 (0.979) C:77% T:82%	pCi/L	10/16/24 14:56	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	2.33 ± 1.40 (2.25)	pCi/L	10/21/24 09:48	7440-14-4	

Sample: 4101343-29 MW110 **Lab ID:** 30723282015 Collected: 09/30/24 07:30 Received: 10/03/24 10:30 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Samplers name and signature not listed on COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.637 ± 0.709 (1.16) C:NA T:95%	pCi/L	10/16/24 14:27	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.847 ± 0.516 (0.970) C:79% T:84%	pCi/L	10/16/24 14:56	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.48 ± 1.23 (2.13)	pCi/L	10/21/24 09:48	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 4101343
Pace Project No.: 30723282

Sample: 4101343-31 MW111 **Lab ID:** 30723282016 Collected: 09/30/24 10:35 Received: 10/03/24 10:30 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Samplers name and signature not listed on COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.198 ± 0.563 (1.04) C:NA T:90%	pCi/L	10/16/24 14:49	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.507 ± 0.431 (0.862) C:80% T:85%	pCi/L	10/16/24 14:57	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.705 ± 0.994 (1.90)	pCi/L	10/21/24 09:48	7440-14-4	

Sample: 4101343-33 MW112 **Lab ID:** 30723282017 Collected: 10/02/24 07:10 Received: 10/03/24 10:30 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Samplers name and signature not listed on COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.848 ± 0.881 (1.42) C:NA T:87%	pCi/L	10/16/24 14:49	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.727 ± 0.432 (0.779) C:73% T:86%	pCi/L	10/16/24 14:57	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.58 ± 1.31 (2.20)	pCi/L	10/21/24 09:48	7440-14-4	

Sample: 4101343-35 MW113 **Lab ID:** 30723282018 Collected: 10/02/24 07:35 Received: 10/03/24 10:30 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Samplers name and signature not listed on COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.169 ± 0.820 (1.49) C:NA T:90%	pCi/L	10/16/24 14:49	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	2.57 ± 0.724 (0.730) C:78% T:81%	pCi/L	10/16/24 14:57	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	2.74 ± 1.54 (2.22)	pCi/L	10/21/24 09:48	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 4101343
Pace Project No.: 30723282

Sample: 4101343-37 MW114 **Lab ID:** 30723282019 Collected: 10/02/24 09:55 Received: 10/03/24 10:30 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Samplers name and signature not listed on COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.555 ± 0.718 (1.20) C:NA T:85%	pCi/L	10/16/24 14:49	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	1.97 ± 0.616 (0.720) C:84% T:81%	pCi/L	10/16/24 14:57	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	2.53 ± 1.33 (1.92)	pCi/L	10/21/24 09:48	7440-14-4	

Sample: 4101343-39 WELL DUP 1 **Lab ID:** 30723282020 Collected: 09/30/24 08:10 Received: 10/03/24 10:30 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Samplers name and signature not listed on COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.213 ± 0.796 (1.43) C:NA T:93%	pCi/L	10/16/24 14:49	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.351 ± 0.311 (0.625) C:83% T:92%	pCi/L	10/16/24 14:57	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.564 ± 1.11 (2.06)	pCi/L	10/21/24 09:48	7440-14-4	

Sample: 4101343-41 WELL DUP 2 **Lab ID:** 30723282021 Collected: 10/01/24 10:57 Received: 10/03/24 10:30 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Samplers name and signature not listed on COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	-0.745 ± 0.539 (1.25) C:NA T:89%	pCi/L	10/17/24 15:21	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.0177 ± 0.255 (0.598) C:86% T:89%	pCi/L	10/15/24 14:52	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.0177 ± 0.794 (1.85)	pCi/L	10/18/24 14:57	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 4101343

Pace Project No.: 30723282

Sample: 4101343-43 FIELD BLANK Lab ID: 30723282022 Collected: 10/01/24 08:50 Received: 10/03/24 10:30 Matrix: Water

PWS: Site ID: Sample Type:

Comments: • Samplers name and signature not listed on COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	-0.161 ± 0.349 (0.804) C:NA T:88%	pCi/L	10/17/24 15:21	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.281 ± 0.290 (0.595) C:84% T:88%	pCi/L	10/15/24 14:52	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.281 ± 0.639 (1.40)	pCi/L	10/18/24 14:57	7440-14-4	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 4101343
Pace Project No.: 30723282

QC Batch:	700949	Analysis Method:	EPA 903.1
QC Batch Method:	EPA 903.1	Analysis Description:	903.1 Radium-226
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 30723282021, 30723282022

METHOD BLANK: 3413879 Matrix: Water

Associated Lab Samples: 30723282021, 30723282022

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.113 ± 0.173 (0.278) C:NA T:95%	pCi/L	10/17/24 14:52	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 4101343
Pace Project No.: 30723282

QC Batch:	700950	Analysis Method:	EPA 904.0
QC Batch Method:	EPA 904.0	Analysis Description:	904.0 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 30723282021, 30723282022

METHOD BLANK: 3413883 Matrix: Water

Associated Lab Samples: 30723282021, 30723282022

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0535 ± 0.342 (0.791) C:78% T:79%	pCi/L	10/15/24 14:50	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 4101343

Pace Project No.: 30723282

QC Batch:	700699	Analysis Method:	EPA 904.0
QC Batch Method:	EPA 904.0	Analysis Description:	904.0 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg
Associated Lab Samples:	30723282001, 30723282002, 30723282003, 30723282004, 30723282005, 30723282006, 30723282007, 30723282008, 30723282009, 30723282010, 30723282011, 30723282012, 30723282013, 30723282014, 30723282015, 30723282016, 30723282017, 30723282018, 30723282019, 30723282020		

METHOD BLANK:	3412725	Matrix:	Water
Associated Lab Samples:	30723282001, 30723282002, 30723282003, 30723282004, 30723282005, 30723282006, 30723282007, 30723282008, 30723282009, 30723282010, 30723282011, 30723282012, 30723282013, 30723282014, 30723282015, 30723282016, 30723282017, 30723282018, 30723282019, 30723282020		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.272 ± 0.309 (0.646) C:81% T:89%	pCi/L	10/16/24 14:55	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 4101343
Pace Project No.: 30723282

QC Batch:	700698	Analysis Method:	EPA 903.1
QC Batch Method:	EPA 903.1	Analysis Description:	903.1 Radium-226
		Laboratory:	Pace Analytical Services - Greensburg
Associated Lab Samples:	30723282001, 30723282002, 30723282003, 30723282004, 30723282005, 30723282006, 30723282007, 30723282008, 30723282009, 30723282010, 30723282011, 30723282012, 30723282013, 30723282014, 30723282015, 30723282016, 30723282017, 30723282018, 30723282019, 30723282020		

METHOD BLANK:	3412723	Matrix:	Water
Associated Lab Samples:	30723282001, 30723282002, 30723282003, 30723282004, 30723282005, 30723282006, 30723282007, 30723282008, 30723282009, 30723282010, 30723282011, 30723282012, 30723282013, 30723282014, 30723282015, 30723282016, 30723282017, 30723282018, 30723282019, 30723282020		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0887 ± 0.213 (0.412) C:NA T:90%	pCi/L	10/16/24 14:11	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 4101343
Pace Project No.: 30723282

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: For Safe Drinking Water Act (SDWA) analyses, the reported Unc. is the calculated Count Uncertainty (95% confidence interval) using a coverage factor of 1.96. For all other matrices (non-SDWA), the reported Unc. is the calculated Expanded Uncertainty (aka Combined Standard Uncertainty, CSU), reported at the 95% confidence interval using a coverage factor of 1.96.

Gamma Spec: The Unc. reported for all gamma-spectroscopy analyses (EPA 901.1), is the calculated Expanded Uncertainty (CSU) at the 95.4% confidence interval, using a coverage factor of 2.0.

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 4101343
Pace Project No.: 30723282

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30723282001	4101343-01 MW1	EPA 903.1	700698		
30723282002	4101343-03 MW2	EPA 903.1	700698		
30723282003	4101343-05 MW3	EPA 903.1	700698		
30723282004	4101343-07 MW4	EPA 903.1	700698		
30723282005	4101343-09 MW4D	EPA 903.1	700698		
30723282006	4101343-11 MW5	EPA 903.1	700698		
30723282007	4101343-13 MW6	EPA 903.1	700698		
30723282008	4101343-15 MW7	EPA 903.1	700698		
30723282009	4101343-17 MW8	EPA 903.1	700698		
30723282010	4101343-19 MW10	EPA 903.1	700698		
30723282011	4101343-21 MW10D	EPA 903.1	700698		
30723282012	4101343-23 MW102	EPA 903.1	700698		
30723282013	4101343-25 MW104	EPA 903.1	700698		
30723282014	4101343-27 MW105R	EPA 903.1	700698		
30723282015	4101343-29 MW110	EPA 903.1	700698		
30723282016	4101343-31 MW111	EPA 903.1	700698		
30723282017	4101343-33 MW112	EPA 903.1	700698		
30723282018	4101343-35 MW113	EPA 903.1	700698		
30723282019	4101343-37 MW114	EPA 903.1	700698		
30723282020	4101343-39 WELL DUP 1	EPA 903.1	700698		
30723282021	4101343-41 WELL DUP 2	EPA 903.1	700949		
30723282022	4101343-43 FIELD BLANK	EPA 903.1	700949		
30723282001	4101343-01 MW1	EPA 904.0	700699		
30723282002	4101343-03 MW2	EPA 904.0	700699		
30723282003	4101343-05 MW3	EPA 904.0	700699		
30723282004	4101343-07 MW4	EPA 904.0	700699		
30723282005	4101343-09 MW4D	EPA 904.0	700699		
30723282006	4101343-11 MW5	EPA 904.0	700699		
30723282007	4101343-13 MW6	EPA 904.0	700699		
30723282008	4101343-15 MW7	EPA 904.0	700699		
30723282009	4101343-17 MW8	EPA 904.0	700699		
30723282010	4101343-19 MW10	EPA 904.0	700699		
30723282011	4101343-21 MW10D	EPA 904.0	700699		
30723282012	4101343-23 MW102	EPA 904.0	700699		
30723282013	4101343-25 MW104	EPA 904.0	700699		
30723282014	4101343-27 MW105R	EPA 904.0	700699		
30723282015	4101343-29 MW110	EPA 904.0	700699		
30723282016	4101343-31 MW111	EPA 904.0	700699		
30723282017	4101343-33 MW112	EPA 904.0	700699		
30723282018	4101343-35 MW113	EPA 904.0	700699		
30723282019	4101343-37 MW114	EPA 904.0	700699		
30723282020	4101343-39 WELL DUP 1	EPA 904.0	700699		
30723282021	4101343-41 WELL DUP 2	EPA 904.0	700950		
30723282022	4101343-43 FIELD BLANK	EPA 904.0	700950		
30723282001	4101343-01 MW1	Total Radium Calculation	704173		
30723282002	4101343-03 MW2	Total Radium Calculation	704173		
30723282003	4101343-05 MW3	Total Radium Calculation	704173		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 4101343
Pace Project No.: 30723282

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30723282004	4101343-07 MW4	Total Radium Calculation	704173		
30723282005	4101343-09 MW4D	Total Radium Calculation	704173		
30723282006	4101343-11 MW5	Total Radium Calculation	704173		
30723282007	4101343-13 MW6	Total Radium Calculation	704173		
30723282008	4101343-15 MW7	Total Radium Calculation	704173		
30723282009	4101343-17 MW8	Total Radium Calculation	704173		
30723282010	4101343-19 MW10	Total Radium Calculation	704173		
30723282011	4101343-21 MW10D	Total Radium Calculation	704173		
30723282012	4101343-23 MW102	Total Radium Calculation	704173		
30723282013	4101343-25 MW104	Total Radium Calculation	704173		
30723282014	4101343-27 MW105R	Total Radium Calculation	704173		
30723282015	4101343-29 MW110	Total Radium Calculation	704173		
30723282016	4101343-31 MW111	Total Radium Calculation	704173		
30723282017	4101343-33 MW112	Total Radium Calculation	704173		
30723282018	4101343-35 MW113	Total Radium Calculation	704173		
30723282019	4101343-37 MW114	Total Radium Calculation	704173		
30723282020	4101343-39 WELL DUP 1	Total Radium Calculation	704173		
30723282021	4101343-41 WELL DUP 2	Total Radium Calculation	704000		
30723282022	4101343-43 FIELD BLANK	Total Radium Calculation	704000		

REPORT OF LABORATORY ANALYSIS

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SUBCONTRACT ORDER
Pace Analytical Services, LLC Kentucky
4101343

SENDING LABORATORY:

Pace Analytical Services, LLC Kentucky
PO BOX 907
Madisonville, KY 42431
Phone: (270) 821-7375
Fax: 844-270-7904
Project Manager: Rob Whittington

RECEIVING LABORATORY:

Pace Analytical Services LLC Greensburg PA
1638 Rosey Town Rd Suite 2,3,4
Greensburg, PA 15601
Phone : (724) 850-
Fax:

WO# : 30723282



Analysis	Expires	Laboratory ID	Comments
----------	---------	---------------	----------

Sample ID: 4101343-01	Water	Sampled: 09/30/2024 12:40	Specific Method
Radium 228 (sub)		03/29/2025 12:40	EPA 904.0 Radium Sum C
Radium Total (sub)		03/29/2025 12:40	EPA 904.0 Radium Sum C
Radium 226 (sub)		03/29/2025 12:40	EPA 903.1

SAMPLE STATE OF ORIGIN KY RUSH MULTIPLIER 0

Sample ID: 4101343-03	Water	Sampled: 10/01/2024 09:55	Specific Method
Radium 226 (sub)		03/30/2025 09:55	EPA 903.1
Radium 228 (sub)		03/30/2025 09:55	EPA 904.0 Radium Sum C
Radium Total (sub)		03/30/2025 09:55	EPA 904.0 Radium Sum C

SAMPLE STATE OF ORIGIN KY RUSH MULTIPLIER 0

Sample ID: 4101343-05	Water	Sampled: 10/01/2024 10:20	Specific Method
Radium 228 (sub)		03/30/2025 10:20	EPA 904.0 Radium Sum C
Radium Total (sub)		03/30/2025 10:20	EPA 904.0 Radium Sum C
Radium 226 (sub)		03/30/2025 10:20	EPA 903.1

SAMPLE STATE OF ORIGIN KY RUSH MULTIPLIER 0

Released By [Signature] Date 10/12/24 Received By [Signature] Date 10/13/24 10:30

Released By _____ Date _____ Received By _____ Date _____

SUBCONTRACT ORDER
Pace Analytical Services, LLC Ke
4101343

WO#: 30723282

PM: TAW

Due Date: 10/24/24

CLIENT: PACE_44_MVKY

Analysis	Expires	Laboratory ID	Comments
----------	---------	---------------	----------

Sample ID: 4101343-07	Water	Sampled:10/02/2024 08:15	Specific Method
Radium 228 (sub)		03/31/2025 08:15	EPA 904.0 Radium Sum C
Radium Total (sub)		03/31/2025 08:15	EPA 904.0 Radium Sum C
Radium 226 (sub)		03/31/2025 08:15	EPA 903.1

004

MW4

SAMPLE STATE OF ORIGIN

KY

RUSH MULTIPLIER

0

Sample ID: 4101343-09	Water	Sampled:10/01/2024 10:55	Specific Method
-----------------------	-------	--------------------------	-----------------

Radium 226 (sub)		03/30/2025 10:55	EPA 903.1
Radium 228 (sub)		03/30/2025 10:55	EPA 904.0 Radium Sum C
Radium Total (sub)		03/30/2025 10:55	EPA 904.0 Radium Sum C

005

MW4D

SAMPLE STATE OF ORIGIN

KY

RUSH MULTIPLIER

0

Sample ID: 4101343-11	Water	Sampled:10/01/2024 08:05	Specific Method
-----------------------	-------	--------------------------	-----------------

Radium 226 (sub)		03/30/2025 08:05	EPA 903.1
Radium 228 (sub)		03/30/2025 08:05	EPA 904.0 Radium Sum C
Radium Total (sub)		03/30/2025 08:05	EPA 904.0 Radium Sum C

006

MW5

SAMPLE STATE OF ORIGIN

KY

RUSH MULTIPLIER

0

Sample ID: 4101343-13	Water	Sampled:09/30/2024 14:55	Specific Method
-----------------------	-------	--------------------------	-----------------

Radium 226 (sub)		03/29/2025 14:55	EPA 903.1
Radium 228 (sub)		03/29/2025 14:55	EPA 904.0 Radium Sum C
Radium Total (sub)		03/29/2025 14:55	EPA 904.0 Radium Sum C

007

MW6

SAMPLE STATE OF ORIGIN

KY

RUSH MULTIPLIER

0

Released By

Date

Received By

Date

Released By

Date

Received By

Date

10/2/24

gkys2

10/3/24 10:30

SUBCONTRACT ORDER
Pace Analytical Services, LLC Ke
4101343

WO#: 30723282

PM: TAW

Due Date: 10/24/24

CLIENT: PACE_44_MVKY

Analysis Expires Laboratory ID Comments

Sample ID: 4101343-15 Water Sampled: 10/01/2024 08:00 Specific Method
Radium Total (sub) 03/30/2025 08:00 EPA 904.0 Radium Sum C
Radium 226 (sub) 03/30/2025 08:00 EPA 903.1
Radium 228 (sub) 03/30/2025 08:00 EPA 904.0 Radium Sum C

MW7

008

SAMPLE STATE OF ORIGIN

KX

RUSH MULTIPLIER

0

Sample ID: 4101343-17 Water Sampled: 09/30/2024 13:27 Specific Method
Radium Total (sub) 03/29/2025 13:27 EPA 904.0 Radium Sum C
Radium 226 (sub) 03/29/2025 13:27 EPA 903.1
Radium 228 (sub) 03/29/2025 13:27 EPA 904.0 Radium Sum C

MW8

009

SAMPLE STATE OF ORIGIN

KX

RUSH MULTIPLIER

0

Sample ID: 4101343-19 Water Sampled: 09/30/2024 15:25 Specific Method
Radium 226 (sub) 03/29/2025 15:25 EPA 903.1
Radium 228 (sub) 03/29/2025 15:25 EPA 904.0 Radium Sum C
Radium Total (sub) 03/29/2025 15:25 EPA 904.0 Radium Sum C

MW10

010

SAMPLE STATE OF ORIGIN

KX

RUSH MULTIPLIER

0

Sample ID: 4101343-21 Water Sampled: 10/02/2024 07:40 Specific Method
Radium 228 (sub) 03/31/2025 07:40 EPA 904.0 Radium Sum C
Radium 226 (sub) 03/31/2025 07:40 EPA 903.1
Radium Total (sub) 03/31/2025 07:40 EPA 904.0 Radium Sum C

MW10D

011

SAMPLE STATE OF ORIGIN

KY

RUSH MULTIPLIER

0

Released By

Date

Received By

Date

Released By

Date

Received By

Date

SUBCONTRACT ORDER

Pace Analytical Services, LLC Ken
4101343

WO#: 30723282

PM: TAW

Due Date: 10/24/24

CLIENT: PACE_44_MVKY

Analysis	Expires	Laboratory ID	Comments
Sample ID: 4101343-23	Water	Sampled:09/30/2024 11:00	Specific Method
Radium 228 (sub)	03/29/2025 11:00	EPA 904.0 Radium Sum C	MW102 012
Radium Total (sub)	03/29/2025 11:00	EPA 904.0 Radium Sum C	
Radium 226 (sub)	03/29/2025 11:00	EPA 903.1	

SAMPLE STATE OF ORIGIN

KY

RUSH MULTIPLIER

0

Sample ID: 4101343-25	Water	Sampled:09/30/2024 09:10	Specific Method
Radium 226 (sub)	03/29/2025 09:10	EPA 903.1	MW104 013
Radium 228 (sub)	03/29/2025 09:10	EPA 904.0 Radium Sum C	
Radium Total (sub)	03/29/2025 09:10	EPA 904.0 Radium Sum C	

SAMPLE STATE OF ORIGIN

KY

RUSH MULTIPLIER

0

Sample ID: 4101343-27	Water	Sampled:09/30/2024 07:08	Specific Method
Radium 228 (sub)	03/29/2025 07:08	EPA 904.0 Radium Sum C	MW05R 014
Radium Total (sub)	03/29/2025 07:08	EPA 904.0 Radium Sum C	
Radium 226 (sub)	03/29/2025 07:08	EPA 903.1	

SAMPLE STATE OF ORIGIN

KY

RUSH MULTIPLIER

0

Sample ID: 4101343-29	Water	Sampled:09/30/2024 07:30	Specific Method
Radium 228 (sub)	03/29/2025 07:30	EPA 904.0 Radium Sum C	MW110 015
Radium Total (sub)	03/29/2025 07:30	EPA 904.0 Radium Sum C	
Radium 226 (sub)	03/29/2025 07:30	EPA 903.1	

SAMPLE STATE OF ORIGIN

KY

RUSH MULTIPLIER

0

Released By

Date

Received By

Date

Released By

Date

Received By

Date

SUBCONTRACT ORDER
Pace Analytical Services, LLC Ke
4101343

WO#: 30723282

PM: TAW

Due Date: 10/24/24

CLIENT: PACE_44_MVKY

Analysis	Expires	Laboratory ID	Comments
----------	---------	---------------	----------

Sample ID: 4101343-31	Water	Sampled:09/30/2024 10:35	Specific Method	016
Radium 226 (sub)		03/29/2025 10:35	EPA 903.1	
Radium 228 (sub)		03/29/2025 10:35	EPA 904.0 Radium Sum C	MW111
Radium Total (sub)		03/29/2025 10:35	EPA 904.0 Radium Sum C	

SAMPLE STATE OF ORIGIN KY RUSH MULTIPLIER 0

Sample ID: 4101343-33	Water	Sampled:10/02/2024 07:10	Specific Method	017
Radium 226 (sub)		03/31/2025 07:10	EPA 903.1	
Radium 228 (sub)		03/31/2025 07:10	EPA 904.0 Radium Sum C	MW112
Radium Total (sub)		03/31/2025 07:10	EPA 904.0 Radium Sum C	

SAMPLE STATE OF ORIGIN KY RUSH MULTIPLIER 0

Sample ID: 4101343-35	Water	Sampled:09/30/2024 07:35	Specific Method	018
Radium 226 (sub)		03/29/2025 07:35	EPA 903.1	
Radium 228 (sub)		03/29/2025 07:35	EPA 904.0 Radium Sum C	MW113
Radium Total (sub)		03/29/2025 07:35	EPA 904.0 Radium Sum C	

SAMPLE STATE OF ORIGIN KY RUSH MULTIPLIER 0

Sample ID: 4101343-37	Water	Sampled:09/30/2024 09:55	Specific Method	019
Radium Total (sub)		03/29/2025 09:55	EPA 904.0 Radium Sum C	
Radium 226 (sub)		03/29/2025 09:55	EPA 903.1	MW114
Radium 228 (sub)		03/29/2025 09:55	EPA 904.0 Radium Sum C	

SAMPLE STATE OF ORIGIN KY RUSH MULTIPLIER 0

Released By [Signature] Date 10/2/24 Received By [Signature] Date 10/3/24 10:30

Released By _____ Date _____ Received By _____ Date _____

SUBCONTRACT ORDER
Pace Analytical Services, LLC Kentucky
4101343

Analysis	Expires	Laboratory ID	Comments
Sample ID: 4101343-39	Water	Sampled:09/30/2024 08:10	Specific Method
Radium Total (sub)	03/29/2025 08:10	EPA 904.0 Radium Sum C	020
Radium 226 (sub)	03/29/2025 08:10	EPA 903.1	WELL DUP 1
Radium 228 (sub)	03/29/2025 08:10	EPA 904.0 Radium Sum C	

SAMPLE STATE OF ORIGIN

KY

RUSH MULTIPLIER

0

Sample ID: 4101343-41	Water	Sampled:10/01/2024 10:57	Specific Method
Radium 226 (sub)	03/30/2025 10:57	EPA 903.1	021
Radium 228 (sub)	03/30/2025 10:57	EPA 904.0 Radium Sum C	WELL DUP 2
Radium Total (sub)	03/30/2025 10:57	EPA 904.0 Radium Sum C	

SAMPLE STATE OF ORIGIN

KY

RUSH MULTIPLIER

0

Sample ID: 4101343-43	Water	Sampled:10/01/2024 08:50	Specific Method
Radium Total (sub)	03/30/2025 08:50	EPA 904.0 Radium Sum C	022
Radium 226 (sub)	03/30/2025 08:50	EPA 903.1	FIELD BLANK
Radium 228 (sub)	03/30/2025 08:50	EPA 904.0 Radium Sum C	

SAMPLE STATE OF ORIGIN

KY

RUSH MULTIPLIER

0

WO#: 30723282

PM: TAW

Due Date: 10/24/24

CLIENT: PACE_44_MVKY

Released By

Date

Received By

Date

Released By

Date

Received By

Date

	DC#_Title: ENV-FRM-GBUR-0088 v07_Sample Condition Upon Receipt-Greensburg
	Effective Date: 01/04/2024

Client Name: Pace - KY

Project #: WO# 30723282

Courier: ☐ Fed Ex ☒ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other

Initial / Date

Tracking Number: 1E067457130546738 / 1E067457130825645

Examined By: PS 10/13/24

Custody Seal on Cooler/Box Present: ☐ Yes ☒ No

Seals Intact: ☐ Yes ☒ No

Labeled By: PS 10/14/24

Thermometer Used: _____ Type of Ice: Wet Blue None

Temped By: _____

Cooler Temperature: Observed Temp _____ °C Correction Factor: _____ °C Final Temp: _____ °C

Temp should be above freezing to 6°C

Comments:	Yes	No	NA	pH paper Lot# <u>1001041</u>	D.P.D. Residual Chlorine Lot # _____
Chain of Custody Present	☒	☐	☐	1.	
Chain of Custody Filled Out:	☒	☐	☐	2.	
-Were client corrections present on COC	☐	☒	☐		
Chain of Custody Relinquished	☒	☐	☐	3.	
Sampler Name & Signature on COC:	☐	☒	☐	4.	
Sample Labels match COC:	☐	☒	☐	5.	
-Includes date/time/ID					
Matrix:					<u>No date/time on bottles</u>
Samples Arrived within Hold Time:	☒	☐	☐	6.	
Short Hold Time Analysis (<72hr remaining):	☐	☒	☐	7.	
Rush Turn Around Time Requested:	☐	☒	☐	8.	
Sufficient Volume:	☒	☐	☐	9.	
Correct Containers Used:	☒	☐	☐	10.	
-Pace Containers Used	☒	☐	☐		
Containers Intact:	☒	☐	☐	11.	
Orthophosphate field filtered:	☐	☐	☒	12.	
Hex Cr Aqueous samples field filtered:	☐	☐	☒	13.	
Organic Samples checked for dichlorination	☐	☐	☒	14.	
Filtered volume received for dissolved tests:	☐	☐	☒	15.	
All containers checked for preservation:	☒	☐	☐	16.	
exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix					<u>added 5.0 mL HNO3 to samples: 002 (2 of 3), 003 (2 of 3), 007 (1/4, 2/4, 3/4), 008 (2 of 3), 009 (2 of 3), 012 (2 of 3), 013 (2 of 3), 016 (2 and 3 of 3), 018 (1 and 2 of 3), 021 (2 and 3 of 3).</u>
All containers meet method preservation requirements:	☐	☒	☐	Initial when completed <u>PS</u>	Date/Time of Preservation <u>10/14/24 9:20</u>
				Lot# of added Preservative <u>30209709</u>	
8260C/D: Headspace in VOA Vials (> 6mm)	☐	☐	☒	17.	
624.1: Headspace in VOA Vials (0mm)	☐	☐	☒	18.	
Radon: Headspace in RAD Vials (0mm)	☐	☐	☒	19.	
Trip Blank Present:	☐	☐	☒	Trip blank custody seal present? YES or NO	
Rad Samples Screened <.05 mrem/hr.	☒	☐	☐	Initial when completed <u>PS</u>	Survey Meter SN: <u>25014380</u>
Comments:					

Note: For NC compliance samples with discrepancies, a copy of this form must be sent to the DEHNR Certification office.

PM Review is documented electronically in LIMS through the SRF Review schedule in the Workorder Edit Screen.

Qualtrax ID: 55680

Page 1 of 1

Page 27 of 33

Page 116 of 166

WU# 30723282

Client

PS 10/2/24

Profile/EZ Login Number

11851

File 4101343

Page 1 of 2

Notes

Sample Line Item	Amber-Glass					Plastic								Vials					Other									
	Matrix	AG1H	AG3S	AG3U	AG5U	AG5T	BP1N	BP1U	BP2S	BP2U	BP3B	BP3N	BP3S	BP3U	DG9S	VG9H	VG9T	VG9U	VOAK	WG9U	WGKU	ZPLC	GCUB	GJN	12GN	AG1U	BG1U	BP2N
001	W						W																					
200	W						W																					
003	W						W																					
100	W						W																					
500	W						W																					
006	W						W																					
007	W						W																					
008	W						W																					
009	W						W																					
010	W						W																					
011	W						W																					
012	W						W																					

Container Codes

Container Codes

Glass			
GJN	1 Gallon Jug with HNO3	DG9S	40mL amber VOA vial H2SO4
AG5U	100mL amber glass unpreserved	VG9U	40mL clear VOA vial
AG5T	100mL amber glass Na Thiosulfate	VG9T	40mL clear VOA vial Na Thiosulfate
GJN	1 Gallon Jug	VG9H	40mL clear VOA vial HCl
AG1S	1L amber glass H2SO4	JGFU	4oz amber wide jar
AG1H	1L amber glass HCl	WGFU	4oz wide jar unpreserved
AG1T	1L amber glass NA Thiosulfate	BG2U	500mL clear glass unpreserved
BG1U	1L clear glass unpreserved	AG2U	500mL amber glass unpreserved
AG3S	250mL amber glass H2SO4	WGKU	8oz wide jar unpreserved
AG3U	250mL amber glass unpreserved	GN	General

Plastic/Misc.			
GCUB	1 gallon cubitainer	EZ1	5g Encore
12GN	1/2 gallon cubitainer	VOAK	Kit Volatile Solid
SP5T	120mL collform Na Thiosulfate	I	Wipe/Swab
BP1N	1L plastic HNO3	ZPLC	Sliploc Bag
BP1U	1L plastic unpreserved	WT	Water
BP3S	250mL plastic H2SO4	SL	Solid
BP3N	250mL plastic HNO3	OL	Non-Aq Liquid
BP3U	250mL plastic unpreserved	WP	Wipe
BP3B	250mL plastic NAOH		
BP2S	500mL plastic H2SO4		
BP2U	500mL plastic unpreserved		

Qualtrax ID: 55678

Pace Analytical Services, LLC

ite

ite 4101343

Profile/EZ Login Number

15811

Notes

Page 2 of 2

Sample Line Item	Matrix	Amber-Glass	Plastic	Vials	Other
013	WT	AG1H	AG3S	AG3U	BP2N
014	WT	AG5U	AG5T	BP1N	BG1U
015				BP1U	AG1U
016				BP2S	12GN
017				BP2U	GJN
018				BP3B	GCUB
019				BP3N	ZPLC
020				BP3S	WGKU
021				BP3U	WGFU
022				OG9S	VOAK
				VG9H	
				VG9T	
				VG9U	

Container Codes

Container Codes

Glass			
GJN	1 Gallon Jug with HNO ₃	DG9S	40mL amber VOA vial H ₂ SO ₄
AG5U	100mL amber glass unpreserved	VG9U	40mL clear VOA vial
AG5T	100mL amber glass Na Thiosulfate	VG9T	40mL clear VOA vial Na Thiosulfate
GJN	1 Gallon Jug	VG9H	40mL clear VOA vial HCl
AG1S	1L amber glass H ₂ SO ₄	JGFU	4oz amber wide jar
AG1H	1L amber glass HCl	WGFU	4oz wide jar unpreserved
AG1T	1L amber glass NA Thiosulfate	BG2U	500mL clear glass unpreserved
BG1U	1L clear glass unpreserved	AG2U	500mL amber glass unpreserved
AG3S	250mL amber glass H ₂ SO ₄	WGPU	8oz wide jar unpreserved
AG3U	250mL amber glass unpreserved	GN	General

Glass

Plastic/Misc.	
GCUB	1 gallon cubitainer
12GN	1/2 gallon cubitainer
SP5T	120mL colliform Na Thiosulfate
BP1N	1L plastic HNO3
BP1U	1L plastic unpreserved
BP3S	250mL plastic H2SO4
BP3N	250mL plastic HNO3
BP3U	250mL plastic unpreserved
BP3B	250mL plastic NaOH
BP2S	500mL plastic H2SO4
BP2U	500mL plastic unpreserved

Plastic/Misc.

EZ1	5g Encore
VOAK	Kit Volatile Solid
I	Wipe/Swab
ZPLC	Siploc Bag

WT	Water
SL	Solid
OL	Non-Aq Liquid
WP	Wipe

Qualtrax ID: 55678

Pace® Analytical Services, LLC

Page 1 of 1

Quality Control Sample Performance Assessment



Test: Ra-226
Analyst: LL1
Date: 10/16/2024
Batch ID: 81653
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	3412723
MB concentration:	0.089
MB Counting Uncertainty:	0.213
MB MDC:	0.412
MB Numerical Performance Indicator:	0.82
MB Status vs Numerical Indicator:	N/A
MB Status vs MDC:	Pass

Laboratory Control Sample Assessment	
LCSID (Y or N)?	Y
LCSID81653	LCSID81653
Count Date:	10/16/2024
Spike ID:	23-063
Spike Concentration (pCi/mL):	32.294
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.651
Target Conc. (pCi/L, g, F):	4.958
Uncertainty (Calculated):	0.233
Result (pCi/L, g, F):	4.797
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.017
Numerical Performance Indicator:	-0.30
Percent Recovery:	96.74%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limits:	133%
Lower % Recovery Limits:	73%

Duplicate Sample Assessment	
Sample ID:	LCS81653
Duplicate Sample ID:	LCS81653
Sample Result (pCi/L, g, F):	4.797
Sample Duplicate Result (pCi/L, g, F):	1.017
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	5.362
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	-0.750
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	12.22%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass
% RPD Limit:	32%

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the RL.

Comments:

REH 10/16/24

Arizona DHES requires qualification for any AZ DW samples reported where the QC does not meet the recommended limits of the Manual for the Certification of Labs Analyzing Drinking Waters, 5th Edition, section 7.7 of Chapter VI.

Quality Control Sample Performance Assessment



Analyst **Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-226
Analyst: CLM
Date: 10/7/2024
Batch ID: 81674
Matrix: DW

Method Blank Assessment	
MB Sample ID	3413879
MB concentration:	0.113
MB Counting Uncertainty:	0.166
MB MDC:	0.278
MB Numerical Performance Indicator:	1.34
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCSID (Y or N)?	Y
LCS81674	LCS81674
Count Date:	10/17/2024
Spike ID:	23-063
Spike Concentration (pCi/mL):	32.294
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.651
Target Conc. (pCi/L, g, F):	4.963
Uncertainty (Calculated):	0.231
Result (pCi/L, g, F):	5.078
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.954
Numerical Performance Indicator:	1.10
Percent Recovery:	111.83%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limits:	133%
Lower % Recovery Limits:	73%

Duplicate Sample Assessment	
LCSID	LCS81674
Duplicate Sample ID:	LCS81674
Sample Result (pCi/L, g, F):	5.550
Sample Duplicate Result (pCi/L, g, F):	1.018
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	5.078
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.954
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	0.662
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	8.10%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass
% RPD Limit:	32%

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the RL.

Comments:

REH 10/18/24
10.17.24

Arizona DHES requires qualification for any AZ DW samples reported where the QC does not meet the recommended limits of the Manual for the Certification of Labs Analyzing Drinking Waters, 5th Edition, section 7.7 of Chapter VI.

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: JJS1
Date: 10/11/2024
Worklist: 81654
Matrix: WT

Method Blank Assessment	
MB Sample ID	3412725
MB concentration:	0.272
M/B 2 Sigma CSU:	0.309
MB MDC:	0.646
MB Numerical Performance Indicator:	1.73
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCSD (Y or N)?	Y
Count Date:	LCS81654
Spike I.D.:	10/16/2024
Decay Corrected Spike Concentration (pCi/mL):	23-043
Volume Used (mL):	34.923
Aliquot Volume (L, g, F):	0.10
Target Conc. (pCi/L, g, F):	0.817
Uncertainty (Calculated):	4.276
Result (pCi/L, g, F):	0.210
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	3.677
Numerical Performance Indicator:	0.863
Percent Recovery:	-1.32
Status vs Numerical Indicator:	85.98%
Status vs Recovery:	N/A
Upper % Recovery Limits:	Pass
Lower % Recovery Limits:	135%
	60%

Duplicate Sample Assessment	
Sample I.D.:	LCS81654
Duplicate Sample I.D.:	LCS81654
Sample Result (pCi/L, g, F):	3.677
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.863
Sample Duplicate Result (pCi/L, g, F):	3.673
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.869
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	0.007
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	0.22%
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	Pass
% RPD Limit:	36%

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

WAL
10/17/24

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: VAL
Date: 10/9/2024
Worklist: 81675
Matrix: WT

Method Blank Assessment	
MB Sample ID	3413883
MB concentration:	0.054
MB 2 Sigma CSU:	0.342
MB MDC:	0.791
MB Numerical Performance Indicator:	0.31
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCSID (Y or N)?	Y
LCS81675	LCS81675
Count Date:	10/15/2024
Spike ID.:	23-043
Decay Corrected Spike Concentration (pCi/mL):	34.935
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.816
Target Conc. (pCi/L, g, F):	4.281
Uncertainty (Calculated):	0.210
Result (pCi/L, g, F):	2.668
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.701
Numerical Performance Indicator:	-4.32
Percent Recovery:	62.33%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limits:	135%
Lower % Recovery Limits:	60%

Duplicate Sample Assessment	
Sample ID.:	LCS81675
Duplicate Sample ID.:	LCS81675
Sample Result (pCi/L, g, F):	2.668
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.701
Sample Duplicate Result (pCi/L, g, F):	3.064
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.761
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	-0.748
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	14.51%
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	Pass
% RPD Limit:	36%

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

Sample Matrix Spike Control Assessment	
Sample Collection Date:	MS/MSD 1
Sample I.D.:	MS/MSD 2
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
MS Spike Uncertainty (calculated):	
MSD Spike Uncertainty (calculated):	
Sample Result:	
Sample Result 2 Sigma CSU (pCi/L, g, F):	
Sample Matrix Spike Result:	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	
MS/MSD Upper % Recovery Limits:	
MS/MSD Lower % Recovery Limits:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	
% RPD Limit:	

VAL
10/16/24

10-16-24

SS

Fw: 30723282

From Rob Whittington <Rob.Whittington@pacelabs.com>

Date Fri 10/25/2024 10:44 AM

To Rob Whittington <Rob.Whittington@pacelabs.com>

From: Jennifer Labbe <Jennifer.Labbe@pacelabs.com>

Sent: Thursday, October 24, 2024 3:15 PM

To: Theresa Wilson <Theresa.Wilson@pacelabs.com>; LeighAnn Miller <LeighAnn.Miller@pacelabs.com>

Subject: Re: 30723282

Hi Theresa,

Water samples analyzed using carriers and tracers for chemical recovery do not require Matrix Spike analysis.

Thanks,
Jennifer

Jennifer Labbe-Kinney

Radiochemistry Department Manager

1638 Roseytown Rd, Suites 2, 3, & 4, Greensburg, PA 15601

O: 724.850.5621 | M: 724.516.6027 | pacelabs.com



From: Theresa Wilson <Theresa.Wilson@pacelabs.com>

Sent: Thursday, October 24, 2024 9:28 AM

To: Jennifer Labbe <Jennifer.Labbe@pacelabs.com>

Subject: 30723282

Hello Jen,

I was wondering if you used this WO as ms/msd for the batch it was on.

Thanks,
Theresa

Theresa Wilson

Project Manager
1638 Roseytown Rd. Suites 2,3 4, Greensburg, PA 15601
d: 1 878-295-4719| o: 724-850-5600 | pacelabs.com



PROCESS PAYMENTS ONLINE – click on the link in red [Online Bill Pay](#).

Chain of Custody

Scheduled for: 10/01/2024



Client: Big Rivers Electric Corporation Wilson Station

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: Wilson Groundwater Wells 092-00004

Phone: (270) 844-8000

PWS ID#:

State: KY

PO#:

Quote#

Please Print Legibly

MW 4

Collected by (Signature): Ashley Hall

Compliance Monitoring? Yes ☒ No ☐

Samples Chlorinated? Yes ☐ No ☒

*For composite samples please indicate begin time, end time and temp (oC) at end time below:

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY

required information

Workorder #

4101343

Sample ID#

Date Collection
(mm/dd/yy): 10/1/24

Time (24 hr): 1055

Bottle and Preservative

Plastic 1L

Containers

1

Sample Description

MW4D

Composite

g/c

Sample Analysis Requested

Alkalinity Bicarbonate Alkalinity
Carbonate TDS Sulfate 300.0
Alkalinity Total Fluoride 300.0
Chloride 300.0 Conductivity (Lab)
Calcium Tot 6010B Arsenic Tot 6020
Cadmium Tot 6020 Boron Tot 6010B
Chromium Tot 6020 Barium Tot 6020
Lithium Tot 6020 Antimony Tot 6020
Beryllium Tot 6020 Cobalt Tot 6020
Copper Tot 6020 Lead Tot 6020 Zinc
Tot 6020 Magnesium Tot 6010B
Molybdenum Tot 6020

4101343-09 B

10/1/24

1055

Plastic 500mL pH<2
w/HNO3

1

MW4D

g/c

Preservation Check: pH: /

4101343-09 C

10/1/24

1055

Plastic 500mL pH<2
w/H2SO4

1

MW4D

g/c

COD TOC

Preservation Check: pH: /

4101343-09 D

10/1/24

1055

CG 250mL pH<2 w/HCL

1

MW4D

g/c

Mercury Tot 245.7

4101343-09 E

10/1/24

1055

CG 250mL pH<2 w/HCL

1

MW4D

g/c

Mercury Tot 245.7

Preservation Check Performed by:

KLS

pH Paper Lot #:

228022

Field data collected by:

Ashley Hall

Date (mm/dd/yy) 10/1/24

Time (24 hr) 1055

pH

6.32

Cond (umho)

2.53

Res Cl (mg/L)

Tot Cl (mg/L)

Free Cl (mg/L)

Temp (oC)

19.97

or

(oF)

Static Water Level

DO (mg/L)

Turb. (NTU)

Flow:

☐ MGD

☐ CFS

☐ g/min

☐ GPD

Relinquished by: (Signature)

Ashley Hall

Received by: (Signature)

Tim. Burch

Date (mm/dd/yy)

10-1-24

Time (24 hr)

11:30

Tim. Burch

Kryz Of

10/1/24

14 00



PACE- Check here if trip charge applied to associated COC

Printed: 9/23/2024 10:35:16AM

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Chain of Custody

Scheduled for: **10/01/2024**



Client: **Big Rivers Electric Corporation Wilson Station**

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: **Wilson Groundwater Wells 092-00004**

Phone: (270) 844-6000

PWS ID#:

PO#:

State: **KY**

Quote#

Please Print Legibly

MW 4

Collected by (Signature): *Ashley Hall*

Compliance Monitoring? Yes ☒ No ☐

Samples Chlorinated? Yes ☐ No ☒

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY Workorder # 4101343 Sample ID#	*required information*		Bottle and Preservative	Containers	Sample Description	Composite	Sample Analysis Requested
	Date (mm/dd/yy):	Collection Time (24 hr):					
4101343-09 F	<u>10/1/24</u>	<u>1055</u>	Plastic 1L pH<2 w/HNO3 Rad 226 (Sub)	1	MW4D	g / c	Radium 226 (sub)
			Preservation Check: pH: <u>/</u>				
4101343-09 G	<u>10/1/24</u>	<u>1055</u>	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW4D	g / c	Radium 228 (sub)
			Preservation Check: pH: <u>/</u>				
4101343-09 H	<u>10/1/24</u>	<u>1055</u>	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW4D	g / c	Radium 228 (sub)
			Preservation Check: pH: <u>/</u>				
4101343-09 I	<u>10/1/24</u>	<u>1055</u>	Plastic 1L pH<2 w/HNO3 (Sub)	1	MW4D	g / c	Radium Total (sub)
			Preservation Check: pH: <u>/</u>				
4101343-09 J	<u>10/1/24</u>	<u>1055</u>	AG 250mL pH<2 w/H2SO4	1	MW4D	g / c	TOC
			Preservation Check: pH: <u>/</u>				
4101343-10 A	<u>10/1/24</u>	<u>1055</u>	CG 250mL pH<2 w/HCl Field Blank	1	Mercury Field Blank MW-4D	g / c	Mercury Tot 245.7 Field Blank

Preservation Check Performed by: *VLS*

pH Paper Lot #: 728022

Field data collected by: *Ashley Hall* Date (mm/dd/yy): 10/1/24 Time (24 hr): 1055
pH 6.34 Cond (umho) 2.53 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____
Temp (oC) 19.97 or (oF) _____ Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____
Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Ashley Hall
Emi Smith

Emi Smith
Ky Gp

10-1-24
10-1-24

11:30
1400

☐ PACE- Check here if trip charge applied to associated COC

Printed: 9/23/2024 10:35:16AM

Page 10 of 44

Page 126 of 166

Chain of Custody

Scheduled for: **10/01/2024**



Client: Big Rivers Electric Corporation Wilson Station

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: Wilson Groundwater Wells 092-00004

Phone: (270) 844-6000

PWS ID#:

State: KY

PO#:

Quote#

Please Print Legibly

Collected by (Signature): [Signature]

Compliance Monitoring? Yes ☒ No ☐

Samples Chlorinated? Yes ☐ No ☒

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY

required information

Workorder #

4101343

Sample ID#

Date (mm/dd/yy):
Collection Time (24 hr):

10-1-24

0805

Bottle and Preservative

Plastic 1L

Containers

1

Sample Description

MW5

Composite

g / c

Sample Analysis Requested

Alkalinity Bicarbonate Alkalinity
Carbonate TDS Sulfate 300.0
Alkalinity Total Fluoride 300.0
Chloride 300.0 Conductivity (Lab)
Calcium Tot 6010B Arsenic Tot 6020
Cadmium Tot 6020 Boron Tot 6010B
Chromium Tot 6020 Barium Tot 6020
Lithium Tot 6020 Antimony Tot 6020
Beryllium Tot 6020 Cobalt Tot 6020
Copper Tot 6020 Lead Tot 6020 Zinc
Tot 6020 Magnesium Tot 6010B
Molybdenum Tot 6020

4101343-11 C

10-1-24

0805

Plastic 500mL pH<2
w/H2SO4

1

MW5

g / c

COD TOC

Preservation Check: pH: 7

4101343-11 D

10-1-24

0805

CG 250mL pH<2 w/HCL

1

MW5

g / c

Mercury Tot 245.7

Preservation Check: pH: 7

4101343-11 E

10-1-24

0805

CG 250mL pH<2 w/HCL

1

MW5

g / c

Mercury Tot 245.7

Preservation Check Performed by: KLS

pH Paper Lot #: 228022

Field data collected by: Travis Smith

Date (mm/dd/yy) 10-1-24

Time (24 hr) 0805

pH

6.32

Cond (umho)

4.32

Res Cl (mg/L)

Tot Cl (mg/L)

Free Cl (mg/L)

Temp (oC)

18.17

or

(oF)

Static Water Level

DO (mg/L)

.04

Turb. (NTU)

20.2

Flow: _____

☐ MGD

☐ CFS

☐ g/min

☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

[Signature]

[Signature]

10-1-24

1400



PACE- Check here if trip charge applied to associated COC

Printed: 9/23/2024 10:35:18AM

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Chain of Custody

Scheduled for: 10/01/2024



Client: **Big Rivers Electric Corporation Wilson Station**

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: **Wilson Groundwater Wells 092-00004**

Phone: (270) 844-8000

PWS ID#:

State: KY

PO#:

Quote#

Please Print Legibly

Collected by (Signature): [Signature]

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY Workorder # Sample ID#	*required information*		Bottle and Preservative	Containers	Sample Description	Composite	Sample Analysis Requested
	Date (mm/dd/yy):	Collection Time (24 hr):					
4101343-11 F	<u>10-1-24</u>	<u>0805</u>	Plastic 1L pH<2 w/HNO3 Rad 226 (Sub)	1	MW5	g / c	Radium 226 (sub)
			Preservation Check: pH: <u>/</u>				
4101343-11 G	<u>10-1-24</u>	<u>0805</u>	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW5	g / c	Radium 228 (sub)
			Preservation Check: pH: <u>/</u>				
4101343-11 H	<u>10-1-24</u>	<u>0805</u>	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW5	g / c	Radium 228 (sub)
			Preservation Check: pH: <u>/</u>				
4101343-11 I	<u>10-1-24</u>	<u>0805</u>	Plastic 1L pH<2 w/HNO3 (Sub)	1	MW5	g / c	Radium Total (sub)
			Preservation Check: pH: <u>/</u>				
4101343-11 J	<u>10-1-24</u>	<u>0805</u>	AG 250mL pH<2 w/H2SO4	1	MW5	g / c	TOC
			Preservation Check: pH: <u>/</u>				
4101343-12 A	<u>10-1-24</u>	<u>0805</u>	CG 250mL pH<2 w/HCl Field Blank	1	Mercury Field Blank MW-5	g / c	Mercury Tot 245.7 Field Blank

Preservation Check Performed by: KLJ

pH Paper Lot #: 228022

Field data collected by: Travis Sneed Date (mm/dd/yy) 10-1-24 Time (24 hr) 0805
pH 6.32 Cond (umho) 4.32 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____
Temp (oC) 18.17 or (oF) _____ Static Water Level _____ DO (mg/L) .04 Turb. (NTU) 20.2
Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature) [Signature]

Received by: (Signature) [Signature]

Date (mm/dd/yy) 10/1/24

Time (24 hr) 1400



PACE- Check here if trip charge applied to associated COC

Printed: 9/23/2024 10:35:16AM

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Chain of Custody

Scheduled for: **10/01/2024**



Client: **Big Rivers Electric Corporation Wilson Station**

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: **Wilson Groundwater Wells 092-00004**

Phone: (270) 844-6000

PWS ID#:

PO#:

Please Print Legibly

State: KY

Quote#

Collected by (Signature): Amy Hall

Compliance Monitoring? Yes ☒ No ☐

Samples Chlorinated? Yes ☐ No ☒

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY

required information

Workorder #

4101343

Sample ID#

Date

(mm/dd/yy):

Time (24 hr):

Bottle and Preservative

Containers

Sample Description

Composite

Sample Analysis Requested

Sample ID#	Date (mm/dd/yy)	Time (24 hr)	Bottle and Preservative	Containers	Sample Description	Composite	Sample Analysis Requested
4101343-13 A	9/30/24	1455	Plastic 1L	1	MW6	g / c	Alkalinity Bicarbonate Alkalinity Carbonate TDS Sulfate 300.0 Alkalinity Total Fluoride 300.0 Chloride 300.0 Conductivity (Lab) Calcium Tot 6010B Arsenic Tot 6020 Cadmium Tot 6020 Boron Tot 6010B Chromium Tot 6020 Barium Tot 6020 Lithium Tot 6020 Antimony Tot 6020 Beryllium Tot 6020 Cobalt Tot 6020 Copper Tot 6020 Lead Tot 6020 Zinc Tot 6020 Magnesium Tot 6010B Molybdenum Tot 6020
4101343-13 B	9/30/24	1455	Plastic 500mL pH<2 w/HNO3	1	MW6	g / c	
4101343-13 C	9/30/24	1455	Plastic 500mL pH<2 w/H2SO4	1	MW6	g / c	COD TOC
4101343-13 D	9/30/24	1455	CG 250mL pH<2 w/HCL	1	MW6	g / c	Mercury Tot 245.7
4101343-13 E	9/30/24	1455	CG 250mL pH<2 w/HCL	1	MW6	g / c	Mercury Tot 245.7

Preservation Check: pH: /

Preservation Check: pH: /

Preservation Check Performed by: KLS

pH Paper Lot #: 228022

Field data collected by: Amy Hall Date (mm/dd/yy) 9/30/24 Time (24 hr) 1455

pH 6.54 Cond (umho) 3.15 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____

Temp (oC) 14.77 or (oF) _____ Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____

Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Amy Hall

Tim Stuch

9-30-24

14:00

Tim Stuch

[Signature]

10-1-24

1400



PACE- Check here if trip charge applied to associated COC

Printed: 9/23/2024 10:35:16AM

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Chain of Custody

Scheduled for: 10/01/2024



Client: **Big Rivers Electric Corporation Wilson Station**

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: **Wilson Groundwater Wells 092-00004**

Phone: (270) 844-6000

PWS ID#:

State: KY

PO#:

Quote#

Please Print Legibly

Collected by (Signature): Ashley Hall

Compliance Monitoring? Yes ☒ No ☐

Samples Chlorinated? Yes ☐ No ☒

*For composite samples please indicate begin time, end time and temp (oC) at end time below:

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY Workorder # Sample ID#	*required information*		Bottle and Preservative	Containers	Sample Description	Composite	Sample Analysis Requested
	Date (mm/dd/yy):	Collection Time (24 hr):					
4101343-13 F	<u>9/30/24</u>	<u>1455</u>	Plastic 1L pH<2 w/HNO3 Rad 226 (Sub)	1	MW6	g / c	Radium 226 (sub)
			Preservation Check: pH: <u>/</u>				
4101343-13 G	<u>9/30/24</u>	<u>1455</u>	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW6	g / c	Radium 228 (sub)
			Preservation Check: pH: <u>/</u>				
4101343-13 H	<u>9/30/24</u>	<u>1455</u>	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW6	g / c	Radium 228 (sub)
			Preservation Check: pH: <u>/</u>				
4101343-13 I	<u>9/30/24</u>	<u>1455</u>	Plastic 1L pH<2 w/HNO3 (Sub)	1	MW6	g / c	Radium Total (sub)
			Preservation Check: pH: <u>/</u>				
4101343-13 J	<u>9/30/24</u>	<u>1455</u>	AG 250mL pH<2 w/H2SO4	1	MW6	g / c	TOC
			Preservation Check: pH: <u>/</u>				
4101343-14 A	<u>9/30/24</u>	<u>1455</u>	CG 250mL pH<2 w/HCl Field Blank	1	Mercury Field Blank MW-6	g / c	Mercury Tot 245.7 Field Blank

Preservation Check Performed by: KLS

pH Paper Lot #: 228022

Field data collected by: Ashley Hall Date (mm/dd/yy) 9/30/24 Time (24 hr) 1455
pH 6.56 Cond (umho) 3.15 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____
Temp (oC) 19.77 or (oF) _____ Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____
Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Ashley Hall
Tina

Tina
Ky

9-30-24
10-1-24

14:00
1400



PACE- Check here if trip charge applied to associated COC

Printed: 9/23/2024 10:35:16AM

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Chain of Custody

Scheduled for: **10/01/2024**



Client: Big Rivers Electric Corporation Wilson Station

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: Wilson Groundwater Wells 092-00004

Phone: (270) 844-6000

PWS ID#:

PO#:

State: KY

Quote#

Please Print Legibly

Collected by (Signature): Dave Medley

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp (oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY

required information

Workorder #

4101343

Sample ID#

Date Collection

(mm/dd/yy): Time (24 hr):

Bottle and Preservative

Containers

Sample Description

Composite

Sample Analysis Requested

4101343-15 A	10/01/24	0800	Plastic 1L	1	MW7	g / c	Alkalinity Bicarbonate Alkalinity Carbonate-TDS-Sulfate 300.0 Alkalinity Total Fluoride 300.0 Chloride 300.0 Conductivity (Lab) Calcium Tot 6010B Arsenic Tot 6020 Cadmium Tot 6020 Boron Tot 6010B Chromium Tot 6020 Barium Tot 6020 Lithium Tot 6020 Antimony Tot 6020 Beryllium Tot 6020 Cobalt Tot 6020 Copper Tot 6020 Lead Tot 6020 Zinc Tot 6020 Magnesium Tot 6010B Molybdenum Tot 6020
4101343-15 B	10/01/24	0800	Plastic 500mL pH<2 w/HNO3	1	MW7	g / c	
Preservation Check: pH: <u>7</u>							
4101343-15 C	10/01/24	0800	Plastic 500mL pH<2 w/H2SO4	1	MW7	g / c	COD TOC
Preservation Check: pH: <u>7</u>							
4101343-15 D	10/01/24	0800	CG 250mL pH<2 w/HCL	1	MW7	g / c	Mercury Tot 245.7
4101343-15 E	10/01/24	0800	CG 250mL pH<2 w/HCL	1	MW7	g / c	Mercury Tot 245.7

Preservation Check Performed by: KLS

pH Paper Lot #: 228022

Field data collected by: Dave Medley Date (mm/dd/yy) 10/01/24 Time (24 hr) 0800
pH 6.48 Cond (umho) 2.67 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____
Temp (oC) 18.67 or (oF) _____ Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____
Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

[Signature]

[Signature]

10/1/24

1400

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Chain of Custody

Scheduled for: **10/01/2024**



Client: **Big Rivers Electric Corporation Wilson Station**

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: **Wilson Groundwater Wells 092-00004**

Phone: (270) 844-6000
PWS ID#:
State: KY

PO#:
Quote#

Please Print Legibly

Collected by (Signature): Dave Medley
required information

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp (oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY *required information*

Workorder #	Date	Collection	Bottle and Preservative	Containers	Sample Description	Composite	Sample Analysis Requested
4101343	(mm/dd/yy):	Time (24 hr):					
4101343-15 F	10/01/24	0800	Plastic 1L pH<2 w/HNO3 Rad 226 (Sub)	1	MW7	g / c	Radium 226 (sub)
			Preservation Check: pH: <u>/</u>				
4101343-15 G	10/01/24	0800	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW7	g / c	Radium 228 (sub)
			Preservation Check: pH: <u>/</u>				
4101343-15 H	10/01/24	0800	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW7	g / c	Radium 228 (sub)
			Preservation Check: pH: <u>/</u>				
4101343-15 I	10/01/24	0800	Plastic 1L pH<2 w/HNO3 (Sub)	1	MW7	g / c	Radium Total (sub)
			Preservation Check: pH: <u>/</u>				
4101343-15 J	10/01/24	0800	AG 250mL pH<2 w/H2SO4	1	MW7	g / c	TOC
			Preservation Check: pH: <u>/</u>				
4101343-16 A	10/01/24	0800	CG 250mL pH<2 w/HCl Field Blank	1	Mercury Field Blank MW-7	g / c	Mercury Tot 245.7 Field Blank

Preservation Check Performed by: KLS

pH Paper Lot #: 228022

Field data collected by: Dave Medley Date (mm/dd/yy) 10/01/24 Time (24 hr) 0800
pH 6.48 Cond (umho) 2.67 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____
Temp (oC) 13.67 or (oF) _____ Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____
Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

10-1-24

1400

☐ PACE- Check here if trip charge applied to associated COC

Printed: 9/23/2024 10:35:16AM

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Chain of Custody

Scheduled for: 10/01/2024



Client: **Big Rivers Electric Corporation Wilson Station**

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: **Wilson Groundwater Wells 092-00004**

Phone: (270) 844-6000
PWS ID#:
State: KY

PO#:
Quote#

Please Print Legibly

Collected by (Signature): Ashley Hall
required information

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp (oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY

required information

Workorder #	Date	Collection	Bottle and Preservative	Containers	Sample Description	Composite	Sample Analysis Requested
4101343	(mm/dd/yy):	Time (24 hr):					
Sample ID#							
4101343-17 A	<u>9/30/24</u>	<u>1327</u>	Plastic 1L	1	MW8	g / c	Alkalinity Bicarbonate Alkalinity Carbonate-TDS Sulfate 300.0 Alkalinity Total Fluoride 300.0 Chloride 300.0 Conductivity (Lab)
4101343-17 B	<u>9/30/24</u>	<u>1327</u>	Plastic 500mL pH<2 w/HNO3	1	MW8	g / c	Calcium Tot 6010B Arsenic Tot 6020 Cadmium Tot 6020 Boron Tot 6010B Chromium Tot 6020 Barium Tot 6020 Lithium Tot 6020 Antimony Tot 6020 Beryllium Tot 6020 Cobalt Tot 6020 Copper Tot 6020 Lead Tot 6020 Zinc Tot 6020 Magnesium Tot 6010B Molybdenum Tot 6020
4101343-17 C	<u>9/30/24</u>	<u>1327</u>	Plastic 500mL pH<2 w/H2SO4	1	MW8	g / c	COD TOC
4101343-17 D	<u>9/30/24</u>	<u>1327</u>	CG 250mL pH<2 w/HCL	1	MW8	g / c	Mercury Tot 245.7
4101343-17 E	<u>9/30/24</u>	<u>1327</u>	CG 250mL pH<2 w/HCL	1	MW8	g / c	Mercury Tot 245.7

Preservation Check Performed by: KLS

pH Paper Lot #: 228022

Field data collected by: Ashley Hall Date (mm/dd/yy) 9/30/24 Time (24 hr) 1327
pH 6.66 Cond (umho) 1.79 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____
Temp (oC) 19.52 or (oF) _____ Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____
Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Ashley Hall
[Signature]

[Signature]
[Signature]

9-30-24
10-1-24

14:00
1400

☐ PACE- Check here if trip charge applied to associated COC

Printed: 9/23/2024 10:35:16AM

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Chain of Custody

Scheduled for: 10/01/2024



Client: **Big Rivers Electric Corporation Wilson Station**

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: **Wilson Groundwater Wells 092-00004**

Phone: (270) 844-6000
PWS ID#:
State: KY

PO#: _____
Quote# _____

Please Print Legibly

Collected by (Signature): Ashley Hall

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp (oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY Workorder # Sample ID#	*required information*		Bottle and Preservative	Containers	Sample Description	Composite	Sample Analysis Requested
	Date (mm/dd/yy):	Collection Time (24 hr):					
4101343-17 F	<u>9/30/24</u>	<u>1327</u>	Plastic 1L pH<2 w/HNO3 Rad 226 (Sub)	1	MW8	g / c	Radium 226 (sub)
			Preservation Check: pH: <u>/</u>				
4101343-17 G	<u>9/30/24</u>	<u>1327</u>	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW8	g / c	Radium 228 (sub)
			Preservation Check: pH: <u>/</u>				
4101343-17 H	<u>9/30/24</u>	<u>1327</u>	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW8	g / c	Radium 228 (sub)
			Preservation Check: pH: <u>/</u>				
4101343-17 I	<u>9/30/24</u>	<u>1327</u>	Plastic 1L pH<2 w/HNO3 (Sub)	1	MW8	g / c	Radium Total (sub)
			Preservation Check: pH: <u>/</u>				
4101343-17 J	<u>9/30/24</u>	<u>1327</u>	AG 250mL pH<2 w/H2SO4	1	MW8	g / c	TOC
			Preservation Check: pH: <u>/</u>				
4101343-18 A	<u>9/30/24</u>	<u>1327</u>	CG 250mL pH<2 w/HCl Field Blank	1	Mercury Field Blank MW-8	g / c	Mercury Tot 245.7 Field Blank

Preservation Check Performed by: KLS

pH Paper Lot #: 228022

Field data collected by: Ashley Hall Date (mm/dd/yy) 9/30/24 Time (24 hr) 1327
pH 6.44 Cond (uS/cm) 1.79 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____
Temp (oC) 19.52 or (oF) _____ Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____
Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Ashley Hall
[Signature]

[Signature]
[Signature]

9-30-24 14:00
10-1-24 1400

☐ PACE- Check here if trip charge applied to associated COC

Printed: 9/23/2024 10:35:16AM

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Chain of Custody

Scheduled for: **10/01/2024**



Client: **Big Rivers Electric Corporation Wilson Station**

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: **Wilson Groundwater Wells 092-00004**

Phone: **(270) 844-6000**

PWS ID#:

State: **KY**

PO#:

Quote#

Please Print Legibly

Collected by (Signature): *Dave Medley*

Compliance Monitoring? Yes ☒ No ☐

Samples Chlorinated? Yes ☐ No ☒

*For composite samples please indicate begin time, end time and temp (oC) at end time below:

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY		*required information*		Bottle and Preservative	Containers	Sample Description	Composite	Sample Analysis Requested
Workorder #	Sample ID#	Date (mm/dd/yy)	Collection Time (24 hr)					
4101343								
4101343-19 A		09/30/24	1525	Plastic 1L	1	MW10	g / c	Alkalinity Bicarbonate Alkalinity Carbonate TDS Sulfate 300.0 Alkalinity Total Fluoride 300.0 Chloride 300.0 Conductivity (Lab) Calcium Tot 6010B Arsenic Tot 6020 Cadmium Tot 6020 Boron Tot 6010B Chromium Tot 6020 Barium Tot 6020 Lithium Tot 6020 Antimony Tot 6020 Beryllium Tot 6020 Cobalt Tot 6020 Copper Tot 6020 Lead Tot 6020 Zinc Tot 6020 Magnesium Tot 6010B Molybdenum Tot 6020
4101343-19 B		09/30/24	1525	Plastic 500mL pH<2 w/HNO3	1	MW10	g / c	
4101343-19 C		09/30/24	1525	Plastic 500mL pH<2 w/H2SO4	1	MW10	g / c	COD TOC
4101343-19 D		09/30/24	1525	CG 250mL pH<2 w/HCL	1	MW10	g / c	Mercury Tot 245.7
4101343-19 E		09/30/24	1525	CG 250mL pH<2 w/HCL	1	MW10	g / c	Mercury Tot 245.7

Preservation Check Performed by: KLS

pH Paper Lot #: 278022

Field data collected by: Dave Medley Date (mm/dd/yy) 09/30/24 Time (24 hr) 1525
pH 5.92 Cond (umho) 2.50 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____
Temp (oC) 21.98 or (oF) _____ Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____
Flow: ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature) *[Signature]*

Received by: (Signature) *[Signature]*

Date (mm/dd/yy) 10-1-24

Time (24 hr) 1400

☐ PACE- Check here if trip charge applied to associated COC

Printed: 9/23/2024 10:35:16AM

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Chain of Custody

Scheduled for: 10/01/2024



Client: Big Rivers Electric Corporation Wilson Station

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: Wilson Groundwater Wells 092-00004

Phone: (270) 844-6000

PWS ID#:

PO#:

Please Print Legibly

State: KY

Quote#

Collected by (Signature): Don Medley
required information

Compliance Monitoring? Yes ☒ No ☐

Samples Chlorinated? Yes ☐ No ☒

*For composite samples please indicate begin time, end time and temp (oC) at end time below:

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY		*required information*		Containers	Sample Description	Composite	Sample Analysis Requested
Workorder #	Date	Collection					
4101343	(mm/dd/yy):	Time (24 hr):	Bottle and Preservative				
Sample ID#							
4101343-19 F	09/30/24	1525	Plastic 1L pH<2 w/HNO3 Rad 226 (Sub)	1	MW10	g / c	Radium 226 (sub)
			Preservation Check: pH: <u> / </u>				
4101343-19 G	09/30/24	1525	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW10	g / c	Radium 228 (sub)
			Preservation Check: pH: <u> / </u>				
4101343-19 H	09/30/24	1525	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW10	g / c	Radium 228 (sub)
			Preservation Check: pH: <u> / </u>				
4101343-19 I	09/30/24	1525	Plastic 1L pH<2 w/HNO3 (Sub)	1	MW10	g / c	Radium Total (sub)
			Preservation Check: pH: <u> / </u>				
4101343-19 J	09/30/24	1525	AG 250mL pH<2 w/H2SO4	1	MW10	g / c	TOC
			Preservation Check: pH: <u> / </u>				
4101343-20 A	09/30/24	1525	CG 250mL pH<2 w/HCl Field Blank	1	Mercury Field Blank MW-10	g / c	Mercury Tot 245.7 Field Blank

Preservation Check Performed by: KLJ pH Paper Lot #: 228022

Field data collected by: Dave Medley Date (mm/dd/yy) 09/30/24 Time (24 hr) 1525
pH 5.92 Cond (umho) 1.50 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____
Temp (oC) 21.98 or (oF) _____ Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____
Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Don Medley

[Signature]

10/1/24

1400

☐ PACE- Check here if trip charge applied to associated COC

Printed: 9/23/2024 10:35:16AM

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Chain of Custody

Scheduled for: 10/01/2024



Client: Big Rivers Electric Corporation Wilson Station

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: Wilson Groundwater Wells 092-00004

Phone: (270) 844-6000

PWS ID#:

State:

PO#:

Quote#

Please Print Legibly

Collected by (Signature): Dawn Medley

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY

Workorder #

4101343

Sample ID#

required information

Date Collection

(mm/dd/yy): Time (24 hr):

Bottle and Preservative

Containers

Sample Description

Composite

Sample Analysis Requested

4101343-21 A	10/01/24	1040	Plastic 1L	1	MW-10D	g/c	Alkalinity Bicarbonate Alkalinity Carbonate-TDS Sulfate 300.0 Alkalinity Total Fluoride 300.0 Chloride 300.0 Conductivity (Lab)
4101343-21 B	10/01/24	1040	Plastic 500mL pH<2 w/HNO3	1	MW-10D	g/c	Calcium Tot 6010B Arsenic Tot 6020 Cadmium Tot 6020 Boron Tot 6010B Chromium Tot 6020 Barium Tot 6020 Lithium Tot 6020 Antimony Tot 6020 Beryllium Tot 6020 Cobalt Tot 6020 Copper Tot 6020 Lead Tot 6020 Zinc Tot 6020 Magnesium Tot 6010B Molybdenum Tot 6020
4101343-21 C	10/01/24	1040	Plastic 500mL pH<2 w/H2SO4	1	MW-10D	g/c	COD TOC
4101343-21 D	10/01/24	1040	CG 250mL pH<2 w/HCL	1	MW-10D	g/c	Mercury Tot 245.7
4101343-21 E	10/01/24	1040	CG 250mL pH<2 w/HCL	1	MW-10D	g/c	Mercury Tot 245.7

Preservation Check: pH: 7

Preservation Check: pH: 7

Preservation Check Performed by:

KLS

pH Paper Lot #:

228022

Field data collected by:

Dawn Medley

Date (mm/dd/yy)

10/01/24

Time (24 hr)

1040

pH

6.22

Cond (umho)

3.45

Res Cl (mg/L)

Tot Cl (mg/L)

Free Cl (mg/L)

Temp (oC)

or

(oF)

Static Water Level

DO (mg/L)

Turb. (NTU)

Flow:

☐ MGD

☐ CFS

☐ g/min

☐ GPD

Relinquished by: (Signature)

[Signature]

Received by: (Signature)

[Signature]

Date (mm/dd/yy)

10/1/24

Time (24 hr)

1400



PACE- Check here if trip charge applied to associated COC

Printed: 9/23/2024 10:35:16AM

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Chain of Custody

Scheduled for: 10/01/2024



Client: Big Rivers Electric Corporation Wilson Station

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: Wilson Groundwater Wells 092-00004

Phone: (270) 844-6000

PWS ID#:

PO#:

Please Print Legibly

State: KY

Quote#

Collected by (Signature): Dave Medley

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp (oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY Workorder # 4101343 Sample ID#	*required information*		Bottle and Preservative	Containers	Sample Description	Composite	Sample Analysis Requested
	Date (mm/dd/yy):	Collection Time (24 hr):					
4101343-21 F	10/01/24	1040	Plastic 1L pH<2 w/HNO3 Rad 226 (Sub)	1	MW-10D	g / c	Radium 226 (sub)
			Preservation Check: pH: <u>/</u>				
4101343-21 G	10/01/24	1040	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW-10D	g / c	Radium 228 (sub)
			Preservation Check: pH: <u>/</u>				
4101343-21 H	10/01/24	1040	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW-10D	g / c	Radium 228 (sub)
			Preservation Check: pH: <u>/</u>				
4101343-21 I	10/01/24	1040	Plastic 1L pH<2 w/HNO3 (Sub)	1	MW-10D	g / c	Radium Total (sub)
			Preservation Check: pH: <u>/</u>				
4101343-21 J	10/01/24	1040	AG 250mL pH<2 w/H2SO4	1	MW-10D	g / c	TOC
			Preservation Check: pH: <u>/</u>				
4101343-22 A	10/01/24	1040	CG 250mL pH<2 w/HCl Field Blank	1	Mercury Field Blank MW-10D	g / c	Mercury Tot 245.7 Field Blank

Preservation Check Performed by: KLS

pH Paper Lot #: 228022

Field data collected by: Dave Medley Date (mm/dd/yy) 10/01/24 Time (24 hr) 1040
pH 6.22 Cond (umho) 3.45 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____
Temp (oC) _____ or (oF) _____ Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____
Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Tammy

KLS

10/1/24

1400



PACE- Check here if trip charge applied to associated COC

Printed: 9/23/2024 10:35:16AM

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Chain of Custody

Scheduled for: 10/01/2024



Client: Big Rivers Electric Corporation Wilson Station

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: Wilson Groundwater Wells 092-00004

Phone: (270) 844-6000
PWS ID#:
State: KY

PO#:
Quote#

Please Print Legibly

Collected by (Signature): Ashley Hall
required information

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY

required information

Workorder #

Date Collection
(mm/dd/yy): Time (24 hr):

4101343
Sample ID#

Bottle and Preservative

Containers

Sample Description

Composite

Sample Analysis Requested

4101343-23 A	<u>9/30/24</u>	<u>1100</u>	Plastic 1L	1	MW102	g / c	Alkalinity Bicarbonate Alkalinity Carbonate TDS Sulfate 300.0 Alkalinity Total Fluoride 300.0 Chloride 300.0 Conductivity (Lab)
4101343-23 B	<u>9/30/24</u>	<u>1100</u>	Plastic 500mL pH<2 w/HNO3	1	MW102	g / c	Calcium Tot 6010B Arsenic Tot 6020 Cadmium Tot 6020 Boron Tot 6010B Chromium Tot 6020 Barium Tot 6020 Lithium Tot 6020 Antimony Tot 6020 Beryllium Tot 6020 Cobalt Tot 6020 Copper Tot 6020 Lead Tot 6020 Zinc Tot 6020 Magnesium Tot 6010B Molybdenum Tot 6020
Preservation Check: pH: <u>/</u>							
4101343-23 C	<u>9/30/24</u>	<u>1100</u>	Plastic 500mL pH<2 w/H2SO4	1	MW102	g / c	COD TOC
Preservation Check: pH: <u>/</u>							
4101343-23 D	<u>9/30/24</u>	<u>1100</u>	CG 250mL pH<2 w/HCL	1	MW102	g / c	Mercury Tot 245.7
4101343-23 E	<u>9/30/24</u>	<u>1100</u>	CG 250mL pH<2 w/HCL	1	MW102	g / c	Mercury Tot 245.7

Preservation Check Performed by: KLS

pH Paper Lot #: 228022

Field data collected by: Ashley Hall

Date (mm/dd/yy) 9/30/24 Time (24 hr) 1100

pH 6.94 Cond (umho) 1.21 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____

Temp (oC) 18.38 or (oF) _____ Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____

Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Ashley Hall
Tina

Tina
KLS

9-30-24
10-1-24

14:00
1400

Chain of Custody

Scheduled for: 10/01/2024



Client: Big Rivers Electric Corporation Wilson Station

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: Wilson Groundwater Wells 092-00004

Phone: (270) 844-6000

PWS ID#:

State: KY

PO#:

Quote#

Please Print Legibly

Collected by (Signature): Ashley Hall

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY		*required information*		Containers	Sample Description	Composite	Sample Analysis Requested
Workorder #	Date	Collection	Bottle and Preservative				
4101343	(mm/dd/yy):	Time (24 hr):					
Sample ID#							
4101343-23 F	9/30/24	1100	Plastic 1L pH<2 w/HNO3 Rad 226 (Sub)	1	MW102	g / c	Radium 226 (sub)
			Preservation Check: pH :	/			
4101343-23 G	9/30/24	1100	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW102	g / c	Radium 228 (sub)
			Preservation Check: pH :	/			
4101343-23 H	9/30/24	1100	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW102	g / c	Radium 228 (sub)
			Preservation Check: pH :	/			
4101343-23 I	9/30/24	1100	Plastic 1L pH<2 w/HNO3 (Sub)	1	MW102	g / c	Radium Total (sub)
			Preservation Check: pH :	/			
4101343-23 J	9/30/24	1100	AG 250mL pH<2 w/H2SO4	1	MW102	g / c	TOC
			Preservation Check: pH :	/			
4101343-24 A	9/30/24	1100	CG 250mL pH<2 w/HCl Field Blank	1	Mercury Field Blank MW-102	g / c	Mercury Tot 245.7 Field Blank

Preservation Check Performed by:

KLS

pH Paper Lot #:

228022

Field data collected by: Ashley Hall Date (mm/dd/yy) 9/30/24 Time (24 hr) 1100

pH 4.94 Cond (umho) 1.21 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____

Temp (oC) 18.38 or (oF) _____ Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____

Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Ashley Hall

Ten. Smedley

9-30-24

14:00

10-1-24

1400

Chain of Custody

Scheduled for: 10/01/2024



Client: Big Rivers Electric Corporation Wilson Station

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419
Phone: (270) 844-6000
PWS ID#:
State: KY

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419
PO#:
Quote#

Project: Wilson Groundwater Wells 092-00004

Please Print Legibly

Collected by (Signature): Ashley Hall

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date Start time End Date End Time Temp (oC)

Effluent: Start Date Start time End Date End Time Temp (oC)

LAB USE ONLY		*required information*		Bottle and Preservative	Containers	Sample Description	Composite	Sample Analysis Requested
Workorder #	Date	Collection						
4101343	(mm/dd/yy):	Time (24 hr):						
Sample ID#								
4101343-25 A	9/30/24	0910		Plastic 1L	1	MW104	g / c	Alkalinity Bicarbonate Alkalinity Carbonate TDS Sulfate 300.0 Alkalinity Total Fluoride 300.0 Chloride 300.0 Conductivity (Lab) Calcium Tot 6010B Arsenic Tot 6020 Cadmium Tot 6020 Boron Tot 6010B Chromium Tot 6020 Barium Tot 6020 Lithium Tot 6020 Antimony Tot 6020 Beryllium Tot 6020 Cobalt Tot 6020 Copper Tot 6020 Lead Tot 6020 Zinc Tot 6020 Magnesium Tot 6010B Molybdenum Tot 6020
4101343-25 B	9/30/24	0910		Plastic 500mL pH<2 w/HNO3	1	MW104	g / c	
				Preservation Check: pH :				
4101343-25 C	9/30/24	0910		Plastic 500mL pH<2 w/H2SO4	1	MW104	g / c	COD TOC
				Preservation Check: pH :				
4101343-25 D	9/30/24	0910		CG 250mL pH<2 w/HCL	1	MW104	g / c	Mercury Tot 245.7
4101343-25 E	9/30/24	0910		CG 250mL pH<2 w/HCL	1	MW104	g / c	Mercury Tot 245.7

Preservation Check Performed by:

KLS

pH Paper Lot #:

228022

Field data collected by: Ashley Hall Date (mm/dd/yy) 9/30/24 Time (24 hr) 0910
pH 6.88 Cond (umho) 2.18 Res Cl (mg/L) Tot Cl (mg/L) Free Cl (mg/L)
Temp (oC) 19.02 or (oF) Static Water Level DO (mg/L) Turb. (NTU)
Flow: ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Ashley Hall

Tom Shuck

9-30-24

14:00

10-1-24

1400



PACE- Check here if trip charge applied to associated COC

Printed: 9/23/2024 10:35:16AM

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Chain of Custody

Scheduled for: 10/01/2024



Client: Big Rivers Electric Corporation Wilson Station

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: Wilson Groundwater Wells 092-00004

Phone: (270) 844-6000

PWS ID#:

State: KY

PO#:

Quote#

Please Print Legibly

Collected by (Signature): Ashley Hall

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date Start time End Date End Time Temp (oC)

Effluent: Start Date Start time End Date End Time Temp (oC)

LAB USE ONLY

required information

Workorder #	Date	Collection	Bottle and Preservative	Containers	Sample Description	Composite	Sample Analysis Requested
4101343	(mm/dd/yy):	Time (24 hr):					
Sample ID#							
4101343-25 F	9/30/24	0910	Plastic 1L pH<2 w/HNO3 Rad 226 (Sub)	1	MW104	g / c	Radium 226 (sub)
			Preservation Check: pH :	/			
4101343-25 G	9/30/24	0910	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW104	g / c	Radium 228 (sub)
			Preservation Check: pH :	/			
4101343-25 H	9/30/24	0910	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW104	g / c	Radium 228 (sub)
			Preservation Check: pH :	/			
4101343-25 I	9/30/24	0910	Plastic 1L pH<2 w/HNO3 (Sub)	1	MW104	g / c	Radium Total (sub)
			Preservation Check: pH :	/			
4101343-25 J	9/30/24	0910	AG 250mL pH<2 w/H2SO4	1	MW104	g / c	TOC
			Preservation Check: pH :	/			
4101343-26 A	9/30/24	0910	CG 250mL pH<2 w/HCl Field Blank	1	Mercury Field Blank MW-104	g / c	Mercury Tot 245.7 Field Blank

Preservation Check Performed by:

KLJ

pH Paper Lot #:

228022

Field data collected by: Ashley Hall Date (mm/dd/yy) 9/30/24 Time (24 hr) 0910
pH 6.88 Cond (umho) 218 Res Cl (mg/L) Tot Cl (mg/L) Free Cl (mg/L)
Temp (oC) 19.02 or (oF) Static Water Level DO (mg/L) Turb. (NTU)
Flow: ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Ashley Hall
Tim. Langel

Tim. Langel
[Signature]

9-30-24
10-1-24

14:00
1400



PACE- Check here if trip charge applied to associated COC

Printed: 9/23/2024 10:35:16AM

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Chain of Custody

Scheduled for: 10/01/2024



Client: Big Rivers Electric Corporation Wilson Station

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: Wilson Groundwater Wells 092-00004

Phone: (270) 844-6000
PWS ID#:
State: KY

PO#:
Quote#

Please Print Legibly

Collected by (Signature): Ashley Hall

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY Workorder # Sample ID#	*required information*		Bottle and Preservative	Containers	Sample Description	Composite	Sample Analysis Requested
	Date (mm/dd/yy):	Collection Time (24 hr):					
4101343-27 A	9/30/24	0708	Plastic 1L	1	MW-105R	g/c	Alkalinity Bicarbonate Alkalinity Carbonate TDS Sulfate 300.0 Alkalinity Total Fluoride 300.0 Chloride 300.0 Conductivity (Lab) Calcium Tot 6010B Arsenic Tot 6020 Cadmium Tot 6020 Boron Tot 6010B Chromium Tot 6020 Barium Tot 6020 Lithium Tot 6020 Antimony Tot 6020 Beryllium Tot 6020 Cobalt Tot 6020 Copper Tot 6020 Lead Tot 6020 Zinc Tot 6020 Magnesium Tot 6010B Molybdenum Tot 6020
4101343-27 B	9/30/24	0708	Plastic 500mL pH<2 w/HNO3	1	MW-105R	g/c	
4101343-27 C	9/30/24	0708	Plastic 500mL pH<2 w/H2SO4	1	MW-105R	g/c	COD TOC
4101343-27 D	9/30/24	0708	CG 250mL pH<2 w/HCL	1	MW-105R	g/c	Mercury Tot 245.7
4101343-27 E	9/30/24	0708	CG 250mL pH<2 w/HCL	1	MW-105R	g/c	Mercury Tot 245.7

Preservation Check: pH: /

Preservation Check: pH: /

Preservation Check Performed by: KLS pH Paper Lot #: 228022

Field data collected by: Ashley Hall Date (mm/dd/yy) 9/30/24 Time (24 hr) 0708
pH 6.98 Cond (umho/cm) 1.31 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____
Temp (oC) 19.38 or (oF) _____ Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____
Flow: ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)	Received by: (Signature)	Date (mm/dd/yy)	Time (24 hr)
Ashley Hall	Tina Head	9-30-24	14:00
Tina Head	Kyle J.	10-1-24	14:00

Chain of Custody

Scheduled for: 10/01/2024



Client: Big Rivers Electric Corporation Wilson Station

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: Wilson Groundwater Wells 092-00004

Phone: (270) 844-6000

PWS ID#:

State: KY

PO#:

Quote#

Please Print Legibly

Collected by (Signature): Ashley Hall

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY

required information

Workorder #

Date Collection

4101343

(mm/dd/yy): Time (24 hr):

Sample ID#

Bottle and Preservative

Containers

Sample Description

Composite

Sample Analysis Requested

4101343-27 F	9/30/24	0708	Plastic 1L pH<2 w/HNO3 Rad 226 (Sub)	1	MW-105R	g / c	Radium 226 (sub)
			Preservation Check: pH :	/			
4101343-27 G	9/30/24	0708	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW-105R	g / c	Radium 228 (sub)
			Preservation Check: pH :	/			
4101343-27 H	9/30/24	0708	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW-105R	g / c	Radium 228 (sub)
			Preservation Check: pH :	/			
4101343-27 I	9/30/24	0708	Plastic 1L pH<2 w/HNO3 (Sub)	1	MW-105R	g / c	Radium Total (sub)
			Preservation Check: pH :	/			
4101343-27 J	9/30/24	0708	AG 250mL pH<2 w/H2SO4	1	MW-105R	g / c	TOC
			Preservation Check: pH :	/			
4101343-28 A	9/30/24	0708	CG 250mL pH<2 w/HCl Field Blank	1	Mercury Field Blank MW-105R	g / c	Mercury Tot 245.7 Field Blank

Preservation Check Performed by:

KLT

pH Paper Lot #:

228022

Field data collected by:

Ashley Hall

Date (mm/dd/yy)

9/30/24

Time (24 hr)

0708

pH

6.98

Cond (umho)

1.31

Res Cl (mg/L)

Tot Cl (mg/L)

Free Cl (mg/L)

Temp (oC)

19.38

or

(oF)

Static Water Level

DO (mg/L)

Turb. (NTU)

Flow:

☐ MGD

☐ CFS

☐ g/min

☐ GPD

Relinquished by: (Signature)

Ashley Hall

Received by: (Signature)

Tim. [Signature]

Date (mm/dd/yy)

9-30-24

Time (24 hr)

14:00

10-1-24

1400



PACE- Check here if trip charge applied to associated COC

Printed: 9/23/2024 10:35:16AM

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Chain of Custody

Scheduled for: 10/01/2024



Client: Big Rivers Electric Corporation Wilson Station

Report To:

Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:

Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: Wilson Groundwater Wells 092-00004

Phone: (270) 844-6000

PWS ID#:

State: KY

PO#:

Quote#

Please Print Legibly

Collected by (Signature): [Signature]

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY

required information

Workorder #

Date Collection
(mm/dd/yy): Time (24 hr):

4101343

Sample ID#

Bottle and Preservative

Containers

Sample Description

Composite

Sample Analysis Requested

4101343-29 A 09.30.24 0730

Plastic 1L

1

MW110

g / c

Alkalinity Bicarbonate Alkalinity
Carbonate TDS Sulfate 300.0
Alkalinity Total Fluoride 300.0
Chloride 300.0 Conductivity (Lab)
Calcium Tot 6010B Arsenic Tot 6020
Cadmium Tot 6020 Boron Tot 6010B
Chromium Tot 6020 Barium Tot 6020
Lithium Tot 6020 Antimony Tot 6020
Beryllium Tot 6020 Cobalt Tot 6020
Copper Tot 6020 Lead Tot 6020 Zinc
Tot 6020 Magnesium Tot 6010B
Molybdenum Tot 6020

4101343-29 B 09.30.24 0730

Plastic 500mL pH<2
w/HNO3

1

MW110

g / c

Preservation Check: pH: /

4101343-29 C 09.30.24 0730

Plastic 500mL pH<2
w/H2SO4

1

MW110

g / c

COD TOC

Preservation Check: pH: /

4101343-29 D 09.30.24 0730

CG 250mL pH<2 w/HCL

1

MW110

g / c

Mercury Tot 245.7

4101343-29 E 09.30.24 0730

CG 250mL pH<2 w/HCL

1

MW110

g / c

Mercury Tot 245.7

Preservation Check Performed by: KLS

pH Paper Lot #: 228022

Field data collected by: Travis Sneed

Date (mm/dd/yy) 09.30.24 Time (24 hr) 0730

pH 6.73 Cond (umho) MS .490 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____

Temp (oC) 19.02 or (oF) _____ Static Water Level _____ DO (mg/L) .15 Turb. (NTU) 66.1

Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature) [Signature]

Received by: (Signature) [Signature]

Date (mm/dd/yy) 10-1-24

Time (24 hr) 1400



PACE- Check here if trip charge applied to associated COC

Printed: 9/23/2024 10:35:16AM

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Chain of Custody

Scheduled for: 10/01/2024



Client: Big Rivers Electric Corporation Wilson Station

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Project: Wilson Groundwater Wells 092-00004

Dawn Storckman
PO Box 24
Henderson, KY 42419

Phone: (270) 844-6000

PWS ID#:

PO#:

State: KY

Quote#

Please Print Legibly

Collected by (Signature): Travis Sneed

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY		*required information*		Containers	Sample Description	Composite	Sample Analysis Requested
Workorder #	Date	Collection	Bottle and Preservative				
4101343	(mm/dd/yy):	Time (24 hr):					
Sample ID#							
4101343-29 F	09.30.24	0730	Plastic 1L pH<2 w/HNO3 Rad 226 (Sub)	1	MW110	g / c	Radium 226 (sub)
			Preservation Check: pH :	/			
4101343-29 G	09.30.24	0730	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW110	g / c	Radium 228 (sub)
			Preservation Check: pH :	/			
4101343-29 H	09.30.24	0730	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW110	g / c	Radium 228 (sub)
			Preservation Check: pH :	/			
4101343-29 I	09.30.24	0730	Plastic 1L pH<2 w/HNO3 (Sub)	1	MW110	g / c	Radium Total (sub)
			Preservation Check: pH :	/			
4101343-29 J	09.30.24	0730	AG 250mL pH<2 w/H2SO4	1	MW110	g / c	TOC
			Preservation Check: pH :	/			
4101343-30 A	09.30.24	0730	CG 250mL pH<2 w/HCl Field Blank	1	Mercury Field Blank MW-110	g / c	Mercury Tot 245.7 Field Blank

Preservation Check Performed by:

KLJ

pH Paper Lot #:

228022

Field data collected by: Travis Sneed Date (mm/dd/yy) 09.30.24 Time (24 hr) 0730
pH 6.73 Cond (umho) .490 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____
Temp (oC) 19.02 or (oF) _____ Static Water Level _____ DO (mg/L) .15 Turb. (NTU) 66.1
Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Travis Sneed

Received by: (Signature)

[Signature]

Date (mm/dd/yy)

10-1-24

Time (24 hr)

1400



PACE- Check here if trip charge applied to associated COC

Printed: 9/23/2024 10:35:16AM

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Chain of Custody

Scheduled for: 10/01/2024



Client: Big Rivers Electric Corporation Wilson Station

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Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: Wilson Groundwater Wells 092-00004

Phone: (270) 844-6000
PWS ID#:
State: KY

PO#:
Quote#

Please Print Legibly

Collected by (Signature): Dave Medley

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY		*required information*		Bottle and Preservative	Containers	Sample Description	Composite	Sample Analysis Requested
Workorder #	Date	Collection						
4101343	(mm/dd/yy):	Time (24 hr):						
Sample ID#								
4101343-31 A	<u>09/30/24</u>	<u>1035</u>		Plastic 1L	1	MW-111	g / c	Alkalinity Bicarbonate Alkalinity Carbonate TDS Sulfate 300.0 Alkalinity Total Fluoride 300.0 Chloride 300.0 Conductivity (Lab) Calcium Tot 6010B Arsenic Tot 6020 Cadmium Tot 6020 Boron Tot 6010B Chromium Tot 6020 Barium Tot 6020 Lithium Tot 6020 Antimony Tot 6020 Beryllium Tot 6020 Cobalt Tot 6020 Copper Tot 6020 Lead Tot 6020 Zinc Tot 6020 Magnesium Tot 6010B Molybdenum Tot 6020
4101343-31 B	<u>09/30/24</u>	<u>1035</u>		Plastic 500mL pH<2 w/HNO3	1	MW-111	g / c	
				Preservation Check: pH: <u>/</u>				
4101343-31 C	<u>09/30/24</u>	<u>1035</u>		Plastic 500mL pH<2 w/H2SO4	1	MW-111	g / c	COD TOC
				Preservation Check: pH: <u>/</u>				
4101343-31 D	<u>09/30/24</u>	<u>1035</u>		CG 250mL pH<2 w/HCL	1	MW-111	g / c	Mercury Tot 245.7
4101343-31 E	<u>09/30/24</u>	<u>1035</u>		CG 250mL pH<2 w/HCL	1	MW-111	g / c	Mercury Tot 245.7

Preservation Check Performed by: KLS

pH Paper Lot #: 228022

Field data collected by: Dave Medley Date (mm/dd/yy) 09/30/24 Time (24 hr) 1035
pH 6.39 Cond (umho) 2.44 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____
Temp (oC) 18.99 or (oF) _____ Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____
Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Ta. Buel

[Signature]

10-1-24

1400



PACE- Check here if trip charge applied to associated COC

Printed: 9/23/2024 10:35:16AM

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Chain of Custody

Scheduled for: 10/01/2024



Client: Big Rivers Electric Corporation Wilson Station

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Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: Wilson Groundwater Wells 092-00004

Phone: (270) 844-6000
PWS ID#:
State: KY

PO#:
Quote#

Please Print Legibly

Collected by (Signature): Dave Medley
required information

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY		*required information*		Bottle and Preservative	Containers	Sample Description	Composite	Sample Analysis Requested
Workorder #	Date	Collection	Time (24 hr):					
4101343	(mm/dd/yy):							
Sample ID#								
4101343-31 F	09/30/24	1035		Plastic 1L pH<2 w/HNO3 Rad 226 (Sub)	1	MW-111	g / c	Radium 226 (sub)
				Preservation Check: pH:	/			
4101343-31 G	09/30/24	1035		Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW-111	g / c	Radium 228 (sub)
				Preservation Check: pH:	/			
4101343-31 H	09/30/24	1035		Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW-111	g / c	Radium 228 (sub)
				Preservation Check: pH:	/			
4101343-31 I	09/30/24	1035		Plastic 1L pH<2 w/HNO3 (Sub)	1	MW-111	g / c	Radium Total (sub)
				Preservation Check: pH:	/			
4101343-31 J	09/30/24	1035		AG 250mL pH<2 w/H2SO4	1	MW-111	g / c	TOC
				Preservation Check: pH:	/			
4101343-32 A	09/30/24	1035		CG 250mL pH<2 w/HCl Field Blank	1	Mercury Field Blank MW-111	g / c	Mercury Tot 245.7 Field Blank

Preservation Check Performed by: KLS

pH Paper Lot #: 228022

Field data collected by: Dave Medley Date (mm/dd/yy) 09/30/24 Time (24 hr) 1035
pH 6.39 Cond (umho) 2.44 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____
Temp (oC) 18.99 or (oF) _____ Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____
Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Dave Medley

KLS

10/1/24

1400

Chain of Custody

Scheduled for: 10/01/2024



Client: Big Rivers Electric Corporation Wilson Station

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: Wilson Groundwater Wells 092-00004

Phone: (270) 844-6000
PWS ID#:
State: KY

PO#:
Quote#

Please Print Legibly

Collected by (Signature): Dave Medley

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY Workorder # 4101343 Sample ID#	*required information*		Bottle and Preservative	Containers	Sample Description	Composite	Sample Analysis Requested
	Date (mm/dd/yy):	Collection Time (24 hr):					
4101343-33 A	09/30/24	1250	Plastic 1L	1	MW-112	g / c	Alkalinity Bicarbonate Alkalinity Carbonate TDS Sulfate 300.0 Alkalinity Total Fluoride 300.0 Chloride 300.0 Conductivity (Lab)
4101343-33 B	09/30/24	1250	Plastic 500mL pH<2 w/HNO3	1	MW-112	g / c	Calcium Tot 6010B Arsenic Tot 6020 Cadmium Tot 6020 Boron Tot 6010B Chromium Tot 6020 Barium Tot 6020 Lithium Tot 6020 Antimony Tot 6020 Beryllium Tot 6020 Cobalt Tot 6020 Copper Tot 6020 Lead Tot 6020 Zinc Tot 6020 Magnesium Tot 6010B Molybdenum Tot 6020
Preservation Check: pH: <u>/</u>							
4101343-33 C	09/30/24	1250	Plastic 500mL pH<2 w/H2SO4	1	MW-112	g / c	COD TOC
Preservation Check: pH: <u>/</u>							
4101343-33 D	09/30/24	1250	CG 250mL pH<2 w/HCL	1	MW-112	g / c	Mercury Tot 245.7
4101343-33 E	09/30/24	1250	CG 250mL pH<2 w/HCL	1	MW-112	g / c	Mercury Tot 245.7

Preservation Check Performed by: KLS

pH Paper Lot #: 228022

Field data collected by: Dave Medley Date (mm/dd/yy) 09/30/24 Time (24 hr) 1250
pH 6.70 Cond (umho) 1.02 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____
Temp (oC) 17.50 or (oF) _____ Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____
Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

[Signature]

[Signature]

10-1-24

1400



PACE- Check here if trip charge applied to associated COC

Printed: 9/23/2024 10:35:16AM

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Chain of Custody

Scheduled for: 10/01/2024



Client: Big Rivers Electric Corporation Wilson Station

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: Wilson Groundwater Wells 092-00004

Phone: (270) 844-6000
PWS ID#:
State: KY

PO#:
Quote#

Please Print Legibly

Collected by (Signature): Dave Medley
required information

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY Workorder # 4101343 Sample ID#	*required information*		Bottle and Preservative	Containers	Sample Description	Composite	Sample Analysis Requested
	Date (mm/dd/yy):	Collection Time (24 hr):					
4101343-33 F	09/30/24	1250	Plastic 1L pH<2 w/HNO3 Rad 226 (Sub)	1	MW-112	g / c	Radium 226 (sub)
			Preservation Check: pH: <u>/</u>				
4101343-33 G	09/30/24	1250	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW-112	g / c	Radium 228 (sub)
			Preservation Check: pH: <u>/</u>				
4101343-33 H	09/30/24	1250	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW-112	g / c	Radium 228 (sub)
			Preservation Check: pH: <u>/</u>				
4101343-33 I	09/30/24	1250	Plastic 1L pH<2 w/HNO3 (Sub)	1	MW-112	g / c	Radium Total (sub)
			Preservation Check: pH: <u>/</u>				
4101343-33 J	09/30/24	1250	AG 250mL pH<2 w/H2SO4	1	MW-112	g / c	TOC
			Preservation Check: pH: <u>/</u>				
4101343-34 A	09/30/24	1250	CG 250mL pH<2 w/HCl Field Blank	1	Mercury Field Blank MW-112	g / c	Mercury Tot 245.7 Field Blank

Preservation Check Performed by: KLJ

pH Paper Lot #: 228022

Field data collected by: Dave Medley Date (mm/dd/yy) 09/30/24 Time (24 hr) 1250
pH 6.70 Cond (umho) 1.02 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____
Temp (oC) 17.50 or (oF) _____ Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____
Flow: _____ ☐MGD ☐CFS ☐g/min ☐GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Tina L. Lavelle

[Signature]

10-1-24

1400

Chain of Custody

Scheduled for: 10/01/2024



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Report To:
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Dawn Storckman
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Project: Wilson Groundwater Wells 092-00004

Dawn Storckman
PO Box 24
Henderson, KY 42419

Phone: (270) 844-6000

PWS ID#:

PO#:

State: KY

Quote#

Please Print Legibly

Collected by (Signature): Dave Medley

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY

required information

Workorder #

Date Collection

4101343

(mm/dd/yy): Time (24 hr):

Sample ID#

Bottle and Preservative

Containers

Sample Description

Composite

Sample Analysis Requested

4101343-35 A

09/30/24

0735

Plastic 1L

1

MW-113

g/c

Alkalinity Bicarbonate Alkalinity
Carbonate TDS Sulfate 300.0
Alkalinity Total Fluoride 300.0
Chloride 300.0 Conductivity (Lab)
Calcium Tot 6010B Arsenic Tot 6020
Cadmium Tot 6020 Boron Tot 6010B
Chromium Tot 6020 Barium Tot 6020
Lithium Tot 6020 Antimony Tot 6020
Beryllium Tot 6020 Cobalt Tot 6020
Copper Tot 6020 Lead Tot 6020 Zinc
Tot 6020 Magnesium Tot 6010B
Molybdenum Tot 6020

4101343-35 B

09/30/24

0735

Plastic 500mL pH<2
w/HNO3

1

MW-113

g/c

4101343-35 C

09/30/24

0735

Plastic 500mL pH<2
w/H2SO4

1

MW-113

g/c

COD TOC

4101343-35 D

09/30/24

0735

CG 250mL pH<2 w/HCL

1

MW-113

g/c

Mercury Tot 245.7

4101343-35 E

09/30/24

0735

CG 250mL pH<2 w/HCL

1

MW-113

g/c

Mercury Tot 245.7

Preservation Check: pH: /

Preservation Check: pH: /

Preservation Check Performed by: KLS

pH Paper Lot #: 228022

Field data collected by: Dave Medley

Date (mm/dd/yy) 09/30/24

Time (24 hr) 0735

pH

6.52

Cond (umho) 1.48

Res Cl (mg/L) _____

Tot Cl (mg/L) _____

Free Cl (mg/L) _____

Temp (oC) 17.71

or

(oF) _____

Static Water Level _____

DO (mg/L) _____

Turb. (NTU) _____

Flow: _____

☐ MGD

☐ CFS

☐ g/min

☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Dave Medley

KLS

10/1/24

1400



PACE- Check here if trip charge applied to associated COC

Printed: 9/23/2024 10:35:16AM

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Chain of Custody

Scheduled for: 10/01/2024



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Henderson, KY 42419

Project: Wilson Groundwater Wells 092-00004

Phone: (270) 844-6000

PWS ID#:

State: KY

PO#:

Quote#

Please Print Legibly

Collected by (Signature): Dave Medley

required information

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY

required information

Workorder #

Date Collection

4101343

(mm/dd/yy): Time (24 hr):

Sample ID#

Bottle and Preservative

Containers

Sample Description

Composite

Sample Analysis Requested

4101343-35 F

09/30/24

0735

Plastic 1L pH<2 w/HNO3
Rad 226 (Sub)

1

MW-113

g / c

Radium 226 (sub)

Preservation Check: pH: /

4101343-35 G

09/30/24

0735

Plastic 1L pH<2 w/HNO3
Rad 228 (Sub)

1

MW-113

g / c

Radium 228 (sub)

Preservation Check: pH: /

4101343-35 H

09/30/24

0735

Plastic 1L pH<2 w/HNO3
Rad 228 (Sub)

1

MW-113

g / c

Radium 228 (sub)

Preservation Check: pH: /

4101343-35 I

09/30/24

0735

Plastic 1L pH<2 w/HNO3
(Sub)

1

MW-113

g / c

Radium Total (sub)

Preservation Check: pH: /

4101343-35 J

09/30/24

0735

AG 250mL pH<2
w/H2SO4

1

MW-113

g / c

TOC

Preservation Check: pH: /

4101343-36 A

09/30/24

0735

CG 250mL pH<2 w/HCl
Field Blank

1

Mercury Field Blank
MW-113

g / c

Mercury Tot 245.7 Field Blank

Preservation Check Performed by: KLJ

pH Paper Lot #: 228022

Field data collected by: Dave Medley

Date (mm/dd/yy) 09/30/24 Time (24 hr) 0735

pH 6.52 Cond (umho) 1.48 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____

Temp (oC) 17.71 or (oF) _____ Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____

Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Tom Luedel

Ky Joffe

10-1-24

1400

Chain of Custody

Scheduled for: 10/01/2024



Client: Big Rivers Electric Corporation Wilson Station

Report To:
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Dawn Storckman
PO Box 24
Henderson, KY 42419

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Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: Wilson Groundwater Wells 092-00004

Phone: (270) 844-6000

PWS ID#:

State: Ky

PO#:

Quote#

Please Print Legibly

Collected by (Signature): Tim. Luedel

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY

required information

Workorder #

Date Collection

4101343

(mm/dd/yy): Time (24 hr):

Sample ID#

Bottle and Preservative

Containers

Sample Description

Composite

Sample Analysis Requested

4101343-37 A 09.30.24 0955

Plastic 1L

1

MW-114

g / c

Alkalinity Bicarbonate Alkalinity
Carbonate TDS Sulfate 300.0
Alkalinity Total Fluoride 300.0
Chloride 300.0 Conductivity (Lab)
Calcium Tot 6010B Arsenic Tot 6020
Cadmium Tot 6020 Boron Tot 6010B
Chromium Tot 6020 Barium Tot 6020
Lithium Tot 6020 Antimony Tot 6020
Beryllium Tot 6020 Cobalt Tot 6020
Copper Tot 6020 Lead Tot 6020 Zinc
Tot 6020 Magnesium Tot 6010B
Molybdenum Tot 6020

4101343-37 B 09.30.24 0955

Plastic 500mL pH<2
w/HNO3

1

MW-114

g / c

Preservation Check: pH: 4

4101343-37 C 09.30.24 0955

Plastic 500mL pH<2
w/H2SO4

1

MW-114

g / c

COD TOC

Preservation Check: pH: 4

4101343-37 D 09.30.24 0955

CG 250mL pH<2 w/HCL

1

MW-114

g / c

Mercury Tot 245.7

4101343-37 E 09.30.24 0955

CG 250mL pH<2 w/HCL

1

MW-114

g / c

Mercury Tot 245.7

Preservation Check Performed by:

KLS

pH Paper Lot #:

228022

Field data collected by: Tim. Luedel

Date (mm/dd/yy) 09.30.24 Time (24 hr) 0955

pH 7.01 Cond (umho) .980 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____

Temp (oC) 19.28 or (oF) _____ Static Water Level _____ DO (mg/L) .05 Turb. (NTU) 30.2

Flow: ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Tim. Luedel

KLS

10-1-24

1400



PACE- Check here if trip charge applied to associated COC

Printed: 9/23/2024 10:35:16AM

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Chain of Custody

Scheduled for: 10/01/2024



Client: **Big Rivers Electric Corporation Wilson Station**

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station

Project: **Wilson Groundwater Wells 092-00004**

Dawn Storckman
PO Box 24
Henderson, KY 42419

Phone: (270) 844-6000

PWS ID#:

State: KY

PO#:

Quote#

Please Print Legibly

Collected by (Signature): [Signature]

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY

required information

Workorder #

Date

Collection

4101343

(mm/dd/yy):

Time (24 hr):

Bottle and Preservative

Containers

Sample Description

Composite

Sample Analysis Requested

Sample ID#

4101343-37 F

09.30.24

0955

Plastic 1L pH<2 w/HNO3
Rad 226 (Sub)

1

MW-114

g / c

Radium 226 (sub)

Preservation Check: pH: /

4101343-37 G

09.30.24

0955

Plastic 1L pH<2 w/HNO3
Rad 228 (Sub)

1

MW-114

g / c

Radium 228 (sub)

Preservation Check: pH: /

4101343-37 H

09.30.24

0955

Plastic 1L pH<2 w/HNO3
Rad 228 (Sub)

1

MW-114

g / c

Radium 228 (sub)

Preservation Check: pH: /

4101343-37 I

09.30.24

0955

Plastic 1L pH<2 w/HNO3
(Sub)

1

MW-114

g / c

Radium Total (sub)

Preservation Check: pH: /

4101343-37 J

09.30.24

0955

AG 250mL pH<2
w/H2SO4

1

MW-114

g / c

TOC

Preservation Check: pH: /

4101343-38 A

09.30.24

0955

CG 250mL pH<2 w/HCl
Field Blank

1

Mercury Field Blank
MW-114

g / c

Mercury Tot 245.7 Field Blank

Preservation Check Performed by: [Signature]

pH Paper Lot #: 228022

Field data collected by: [Signature]

Date (mm/dd/yy) 09.30.24

Time (24 hr) 0955

pH 7.01

Cond (umho) 980

Res Cl (mg/L) _____

Tot Cl (mg/L) _____

Free Cl (mg/L) _____

Temp (oC) 19.28

or

(oF) _____

Static Water Level _____

DO (mg/L) .05

Turb. (NTU) 30.2

Flow: _____

☐ MGD

☐ CFS

☐ g/min

☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

[Signature]

[Signature]

10-1-24

1400



PACE- Check here if trip charge applied to associated COC

Printed: 9/23/2024 10:35:16AM

Page 154 of 166

Chain of Custody

Scheduled for: **10/01/2024**



Client: **Big Rivers Electric Corporation Wilson Station**

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: **Wilson Groundwater Wells 092-00004**

Phone: (270) 844-6000

PWS ID#:

State: KY

PO#:

Quote#

Please Print Legibly

Collected by (Signature): *Travis Sand*
required information

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY

required information

Workorder #

Date Collection

4101343

(mm/dd/yy): Time (24 hr):

Sample ID#

Bottle and Preservative

Containers

Sample Description

Composite

Sample Analysis Requested

4101343-39 A 09:30:24 0810

Plastic 1L

1

Well Duplicate 1

g / c

Alkalinity Bicarbonate Alkalinity
Carbonate TDS Sulfate 300.0
Alkalinity Total Fluoride 300.0
Chloride 300.0 Conductivity (Lab)
Calcium Tot 6010B Arsenic Tot 6020
Cadmium Tot 6020 Boron Tot 6010B
Chromium Tot 6020 Barium Tot 6020
Lithium Tot 6020 Antimony Tot 6020
Beryllium Tot 6020 Cobalt Tot 6020
Copper Tot 6020 Lead Tot 6020 Zinc
Tot 6020 Magnesium Tot 6010B
Molybdenum Tot 6020

4101343-39 B 09:30:24 0810

Plastic 500mL pH<2
w/HNO3

1

Well Duplicate 1

g / c

Preservation Check: pH: /

4101343-39 C 09:30:24 0810

Plastic 500mL pH<2
w/H2SO4

1

Well Duplicate 1

g / c

COD TOC

Preservation Check: pH: /

4101343-39 D 09:30:24 0810

CG 250mL pH<2 w/HCL

1

Well Duplicate 1

g / c

Mercury Tot 245.7

4101343-39 E 09:30:24 0810

CG 250mL pH<2 w/HCL

1

Well Duplicate 1

g / c

Mercury Tot 245.7

Preservation Check Performed by: KLS

pH Paper Lot #: 228022

Field data collected by: Travis Sand Date (mm/dd/yy) 09:30:24 Time (24 hr) 0810

pH 6.73 Cond (umho) MS .490 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____

Temp (oC) 19.02 or (oF) _____ Static Water Level _____ DO (mg/L) .15 Turb. (NTU) 666.1

Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Travis Sand

Kryz

10-1-24

1400

Chain of Custody

Scheduled for: **10/01/2024**



Client: Big Rivers Electric Corporation Wilson Station

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: Wilson Groundwater Wells 092-00004

Phone: (270) 844-6000

PWS ID#:

State: KY

PO#: _____

Quote# _____

Please Print Legibly

Collected by (Signature): Travis Sand

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY

required information

Workorder #

Date Collection

4101343

(mm/dd/yy): Time (24 hr):

Sample ID#

Bottle and Preservative

Containers

Sample Description

Composite

Sample Analysis Requested

4101343-39 F 09.30.24 0810

Plastic 1L pH<2 w/HNO3
Rad 226 (Sub)

1

Well Duplicate 1

g / c

Radium 226 (sub)

Preservation Check: pH: /

4101343-39 G 09.30.24 0810

Plastic 1L pH<2 w/HNO3
Rad 228 (Sub)

1

Well Duplicate 1

g / c

Radium 228 (sub)

Preservation Check: pH: /

4101343-39 H 09.30.24 0810

Plastic 1L pH<2 w/HNO3
Rad 228 (Sub)

1

Well Duplicate 1

g / c

Radium 228 (sub)

Preservation Check: pH: /

4101343-39 I 09.30.24 0810

Plastic 1L pH<2 w/HNO3
(Sub)

1

Well Duplicate 1

g / c

Radium Total (sub)

Preservation Check: pH: /

4101343-39 J 09.30.24 0810

AG 250mL pH<2
w/H2SO4

1

Well Duplicate 1

g / c

TOC

Preservation Check: pH: /

4101343-40 A 09.30.24 0810

CG 250mL pH<2 w/HCl
Field Blank

1

Mercury Field Blank Well
Dup-1

g / c

Mercury Tot 245.7 Field Blank

Preservation Check Performed by: KLJ

pH Paper Lot #: 228022

Field data collected by: Travis Sand

Date (mm/dd/yy) 09.30.24 Time (24 hr) 0810

pH 6.73 Cond (MS) .490 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____

Temp (oC) 19.02 or (oF) _____ Static Water Level _____ DO (mg/L) .15 Turb. (NTU) 66.1

Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Travis Sand

[Signature]

10-1-24

1400

Chain of Custody

Scheduled for: 10/01/2024



Client: Big Rivers Electric Corporation Wilson Station

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: Wilson Groundwater Wells 092-00004

Phone: (270) 844-6000

PWS ID#:

State: Ky

PO#: _____

Quote# _____

Please Print Legibly

Collected by (Signature): Travis Sand
required information

Compliance Monitoring? Yes ☒ No ☐

Samples Chlorinated? Yes ☐ No ☒

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY

required information

Workorder #

4101343

Sample ID#

Date

(mm/dd/yy):

Collection

Time (24 hr):

Bottle and Preservative

Containers

Sample Description

Composite

Sample Analysis Requested

4101343-41 A 10-1-24 1057

Plastic 1L

1

Well Duplicate 2

g / c

Alkalinity Bicarbonate Alkalinity

Carbonate TDS Sulfate 300.0

Alkalinity Total Fluoride 300.0

Chloride 300.0 Conductivity (Lab)

Calcium Tot 6010B Arsenic Tot 6020

Cadmium Tot 6020 Boron Tot 6010B

Chromium Tot 6020 Barium Tot 6020

Lithium Tot 6020 Antimony Tot 6020

Beryllium Tot 6020 Cobalt Tot 6020

Copper Tot 6020 Lead Tot 6020 Zinc

Tot 6020 Magnesium Tot 6010B

Molybdenum Tot 6020

4101343-41 B 10-1-24 1057

Plastic 500mL pH<2
w/HNO3

1

Well Duplicate 2

g / c

Preservation Check: pH: /

4101343-41 C 10-1-24 1057

Plastic 500mL pH<2
w/H2SO4

1

Well Duplicate 2

g / c

COD TOC

Preservation Check: pH: /

4101343-41 D 10-1-24 1057

CG 250mL pH<2 w/HCL

1

Well Duplicate 2

g / c

Mercury Tot 245.7

4101343-41 E 10-1-24 1057

CG 250mL pH<2 w/HCL

1

Well Duplicate 2

g / c

Mercury Tot 245.7

Preservation Check Performed by: KLJ

pH Paper Lot #:

228022

Field data collected by: Travis Sand

Date (mm/dd/yy) 10-1-24 Time (24 hr) 1057

pH 6.56 Cond (umho) 1.80 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____

Temp (oC) 20.52 or (oF) _____ Static Water Level _____ DO (mg/L) .18 Turb. (NTU) 64.1

Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature) Travis Sand

Received by: (Signature) Ky

Date (mm/dd/yy) 10-1-24

Time (24 hr) 1400

Chain of Custody

Scheduled for: 10/01/2024



Client: Big Rivers Electric Corporation Wilson Station

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: Wilson Groundwater Wells 092-00004

Phone: (270) 844-6000
PWS ID#: _____
State: KY

PO#: _____
Quote# _____

Please Print Legibly

Collected by (Signature): [Signature]
required information

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY		*required information*		Containers	Sample Description	Composite	Sample Analysis Requested
Workorder #	Date	Collection					
4101343	(mm/dd/yy):	Time (24 hr):	Bottle and Preservative				
Sample ID#							
4101343-41 F	<u>10-1-24</u>	<u>1057</u>	Plastic 1L pH<2 w/HNO3 Rad 226 (Sub)	<u>1</u>	Well Duplicate 2	g / c	Radium 226 (sub)
			Preservation Check: pH: <u>/</u>				
4101343-41 G	<u>10-1-24</u>	<u>1057</u>	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	<u>1</u>	Well Duplicate 2	g / c	Radium 228 (sub)
			Preservation Check: pH: <u>/</u>				
4101343-41 H	<u>10-1-24</u>	<u>1057</u>	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	<u>1</u>	Well Duplicate 2	g / c	Radium 228 (sub)
			Preservation Check: pH: <u>/</u>				
4101343-41 I	<u>10-1-24</u>	<u>1057</u>	Plastic 1L pH<2 w/HNO3 (Sub)	<u>1</u>	Well Duplicate 2	g / c	Radium Total (sub)
			Preservation Check: pH: <u>/</u>				
4101343-41 J	<u>10-1-24</u>	<u>1057</u>	AG 250mL pH<2 w/H2SO4	<u>1</u>	Well Duplicate 2	g / c	TOC
			Preservation Check: pH: <u>/</u>				
4101343-42 A	<u>10-1-24</u>	<u>1057</u>	CG 250mL pH<2 w/HCl Field Blank	<u>1</u>	Mercury Field Blank Well Dup-2	g / c	Mercury Tot 245.7 Field Blank

Preservation Check Performed by: KLT pH Paper Lot #: 278622

Field data collected by: Travis Sneed Date (mm/dd/yy) 10-1-24 Time (24 hr) 1057
pH 6.56 Cond (umho) 1.80 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____
Temp (oC) 20.52 or (oF) _____ Static Water Level _____ DO (mg/L) .18 Turb. (NTU) 64.1
Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature) [Signature] Received by: (Signature) [Signature] Date (mm/dd/yy) 10-1-24 Time (24 hr) 1400

Chain of Custody

Scheduled for: 10/01/2024



Client: Big Rivers Electric Corporation Wilson Station

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: Wilson Groundwater Wells 092-00004

Phone: (270) 844-6000

PWS ID#:

State: Ky

PO#:

Quote#

Please Print Legibly

Collected by (Signature): Travis Speed

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY

required information

Workorder #

Date Collection

4101343

(mm/dd/yy): Time (24 hr):

Sample ID#

Bottle and Preservative

Containers

Sample Description

Composite

Sample Analysis Requested

4101343-43 A 10-1-24 0850

Plastic 1L

1

Field Blank

g / c

Alkalinity Bicarbonate Alkalinity

Carbonate TDS Sulfate 300.0

Alkalinity Total Fluoride 300.0

Chloride 300.0 Conductivity (Lab)

Calcium Tot 6010B Arsenic Tot 6020

Cadmium Tot 6020 Boron Tot 6010B

Chromium Tot 6020 Barium Tot 6020

Lithium Tot 6020 Antimony Tot 6020

Beryllium Tot 6020 Cobalt Tot 6020

Copper Tot 6020 Lead Tot 6020 Zinc

Tot 6020 Magnesium Tot 6010B

Molybdenum Tot 6020

4101343-43 B 10-1-24 0850

Plastic 500mL pH<2
w/HNO3

1

Field Blank

g / c

Preservation Check: pH: 7

4101343-43 C 10-1-24 0850

Plastic 500mL pH<2
w/H2SO4

1

Field Blank

g / c

COD TOC

Preservation Check: pH: 7

4101343-43 D 10-1-24 0850

CG 250mL pH<2 w/HCL

1

Field Blank

g / c

Mercury Tot 245.7

4101343-43 E 10-1-24 0850

CG 250mL pH<2 w/HCL

1

Field Blank

g / c

Mercury Tot 245.7

Preservation Check Performed by: PLS

pH Paper Lot #: 228022

Thermometer Serial Number:

230753815

240381205

Temperature 43.0 °C

Field data collected by: Travis Speed Date (mm/dd/yy) 10-1-24 Time (24 hr) 0850

pH 7 Cond (umho) _____ Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____

Temp (oC) _____ or (oF) _____ Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____

Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Travis Speed

[Signature]

10-1-24

1400

Chain of Custody

Scheduled for: 10/01/2024



Client: Big Rivers Electric Corporation Wilson Station

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: Wilson Groundwater Wells 092-00004

Phone: (270) 844-6000

PWS ID#:

State: Ky

PO#:

Quote#

Please Print Legibly

Collected by (Signature): [Signature]

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY

required information

Workorder #

4101343

Sample ID#

Date Collection
(mm/dd/yy): Time (24 hr):

Bottle and Preservative

Containers

Sample Description

Composite

Sample Analysis Requested

4101343-43 F	10-1-24	0850	Plastic 1L pH<2 w/HNO3 Rad 226 (Sub)	1	Field Blank	g / c	Radium 226 (sub)
			Preservation Check: pH:	/			
4101343-43 G	10-1-24	0850	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	Field Blank	g / c	Radium 228 (sub)
			Preservation Check: pH:	/			
4101343-43 H	10-1-24	0850	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	Field Blank	g / c	Radium 228 (sub)
			Preservation Check: pH:	/			
4101343-43 I	10-1-24	0850	Plastic 1L pH<2 w/HNO3 (Sub)	1	Field Blank	g / c	Radium Total (sub)
			Preservation Check: pH:	/			
4101343-43 J	10-1-24	0850	AG 250mL pH<2 w/H2SO4	1	Field Blank	g / c	TOC
			Preservation Check: pH:	/			
4101343-44 A	10-1-24	0850	CG 250mL pH<2 w/HCl Field Blank	1	Mercury Field Blank	g / c	Mercury Tot 245.7 Field Blank

Preservation Check Performed by:

KLS

pH Paper Lot #:

228022

Field data collected by: Travis Snodgrass Date (mm/dd/yy) 10-1-24 Time (24 hr) 0850

pH _____ Cond (umho) _____ Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____

Temp (oC) _____ or (oF) _____ Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____

Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

[Signature]

[Signature]

10-1-24

1400

Chain of Custody

Scheduled for: 10/01/2024



Client: **Big Rivers Electric Corporation Wilson Station**

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station

Project: **Wilson Groundwater Wells 092-00004**

Dawn Storckman
PO Box 24
Henderson, KY 42419

Phone: (270) 844-6000

PWS ID#:

PO#: _____

State: KY

Quote# _____

Please Print Legibly

Collected by (Signature): Dave Medley
required information

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY

required information

Workorder #	Date (mm/dd/yy)	Collection Time (24 hr)	Bottle and Preservative	Containers	Sample Description	Composite	Sample Analysis Requested
4101343							
Sample ID#							
4101343-07 A	<u>10/02/24</u>	<u>0815</u>	Plastic 1L	1	MW4	g / c	Alkalinity Bicarbonate Alkalinity Carbonate TDS Sulfate 300.0 Alkalinity Total Fluoride 300.0 Chloride 300.0 Conductivity (Lab) Calcium Tot 6010B Arsenic Tot 6020 Cadmium Tot 6020 Boron Tot 6010B Chromium Tot 6020 Barium Tot 6020 Lithium Tot 6020 Antimony Tot 6020 Beryllium Tot 6020 Cobalt Tot 6020 Copper Tot 6020 Lead Tot 6020 Zinc Tot 6020 Magnesium Tot 6010B Molybdenum Tot 6020
4101343-07 B	<u>10/02/24</u>	<u>0815</u>	Plastic 500mL pH<2 w/HNO3	1	MW4	g / c	
				Preservation Check: pH: ☒			
4101343-07 C	<u>10/02/24</u>	<u>0815</u>	Plastic 500mL pH<2 w/H2SO4	1	MW4	g / c	COD TOC
				Preservation Check: pH: ☒			
4101343-07 D	<u>10/02/24</u>	<u>0815</u>	CG 250mL pH<2 w/HCL	1	MW4	g / c	Mercury Tot 245.7
4101343-07 E	<u>10/02/24</u>	<u>0815</u>	CG 250mL pH<2 w/HCL	1	MW4	g / c	Mercury Tot 245.7

Preservation Check Performed by: MK

pH Paper Lot #: 228022

Field data collected by: Dave Medley Date (mm/dd/yy) 10/02/24 Time (24 hr) 0815
pH 6.36 Cond (umho) 2.53 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____
Temp (oC) 14.97 or (oF) _____ Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____
Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

[Signature]

[Signature]

10/2/24

008

Chain of Custody

Scheduled for: 10/01/2024



Client: Big Rivers Electric Corporation Wilson Station

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station

Project: Wilson Groundwater Wells 092-00004

Dawn Storckman
PO Box 24
Henderson, KY 42419

Phone: (270) 844-6000

PWS ID#:

State: KY

PO#:

Quote#

Please Print Legibly

Collected by (Signature): Dave Medley

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY Workorder # Sample ID#	*required information*		Bottle and Preservative	Containers	Sample Description	Composite	Sample Analysis Requested
	Date (mm/dd/yy)	Collection Time (24 hr)					
4101343-07 F	10/02/24	0815	Plastic 1L pH<2 w/HNO3 Rad 226 (Sub)	1	MW4	g / c	Radium 226 (sub)
			Preservation Check: pH :	☒			
4101343-07 G	10/02/24	0815	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW4	g / c	Radium 228 (sub)
			Preservation Check: pH :	☒			
4101343-07 H	10/02/24	0815	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW4	g / c	Radium 228 (sub)
			Preservation Check: pH :	☒			
4101343-07 I	10/02/24	0815	Plastic 1L pH<2 w/HNO3 (Sub)	1	MW4	g / c	Radium Total (sub)
			Preservation Check: pH :	☒			
4101343-07 J	10/02/24	0815	AG 250mL pH<2 w/H2SO4	1	MW4	g / c	TOC
			Preservation Check: pH :	☒			
4101343-08 A	10/02/24	0815	CG 250mL pH<2 w/HCl Field Blank	1	Mercury Field Blank MW-4	g / c	Mercury Tot 245.7 Field Blank

Preservation Check Performed by: MR

pH Paper Lot #: 228022

Field data collected by: Dave Medley Date (mm/dd/yy) 10/02/24 Time (24 hr) 0815
pH 6.36 Cond (umho) 2.53 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____
Temp (oC) 19.97 or (oF) _____ Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____
Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature) [Signature]

Received by: (Signature) [Signature]

Date (mm/dd/yy) 10/2/24

Time (24 hr) 1008

Chain of Custody

Scheduled for: **10/01/2024**



Client: **Big Rivers Electric Corporation Wilson Station**

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
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Project: **Wilson Groundwater Wells 092-00004**

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Collected by (Signature): Dave Medley

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY		*required information*		Bottle and Preservative	Containers	Sample Description	Composite	Sample Analysis Requested
Workorder #	Date	Collection	Time (24 hr):					
Sample ID#	(mm/dd/yy)							
4101343-21 A	10/02/24	0700		Plastic 1L	1	MW-10D	g / c	Alkalinity Bicarbonate Alkalinity Carbonate TDS Sulfate 300.0 Alkalinity Total Fluoride 300.0 Chloride 300.0 Conductivity (Lab) Calcium Tot 6010B Arsenic Tot 6020 Cadmium Tot 6020 Boron Tot 6010B Chromium Tot 6020 Barium Tot 6020 Lithium Tot 6020 Antimony Tot 6020 Beryllium Tot 6020 Cobalt Tot 6020 Copper Tot 6020 Lead Tot 6020 Zinc Tot 6020 Magnesium Tot 6010B Molybdenum Tot 6020
4101343-21 B	10/02/24	0700		Plastic 500mL pH<2 w/HNO3	1	MW-10D	g / c	
				Preservation Check: pH : <u>✓</u>				
4101343-21 C	10/02/24	0700		Plastic 500mL pH<2 w/H2SO4	1	MW-10D	g / c	COD TOC
				Preservation Check: pH : <u>✓</u>				
4101343-21 D	10/02/24	0700		CG 250mL pH<2 w/HCL	1	MW-10D	g / c	Mercury Tot 245.7
4101343-21 E	10/02/24	0700		CG 250mL pH<2 w/HCL	1	MW-10D	g / c	Mercury Tot 245.7

Preservation Check Performed by: MIL

pH Paper Lot #: 228022

Field data collected by: Dave Medley Date (mm/dd/yy) 10/02/24 Time (24 hr) 0700
pH 6.22 Cond (umho) 3.45 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____
Temp (oC) 22.93 or (oF) _____ Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____
Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature) Dave Medley

Received by: (Signature) [Signature]

Date (mm/dd/yy) 10/2/24

Time (24 hr) 1008

Chain of Custody

Scheduled for: 10/01/2024



Client: Big Rivers Electric Corporation Wilson Station

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: Wilson Groundwater Wells 092-00004

Phone: (270) 844-6000

PWS ID#:

State: KY

PO#:

Quote#

Please Print Legibly

Collected by (Signature): Dan Medley
required information

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY		*required information*		Bottle and Preservative	Containers	Sample Description	Composite	Sample Analysis Requested
Workorder #	Date	Collection	Time (24 hr):					
4101343	(mm/dd/yy):							
Sample ID#								
4101343-21 F	10/02/24	0700		Plastic 1L pH<2 w/HNO3 Rad 226 (Sub)	1	MW-10D	g / c	Radium 226 (sub)
				Preservation Check: pH: _____				
4101343-21 G	10/02/24	0700		Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW-10D	g / c	Radium 228 (sub)
				Preservation Check: pH: _____				
4101343-21 H	10/02/24	0700		Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW-10D	g / c	Radium 228 (sub)
				Preservation Check: pH: _____				
4101343-21 I	10/02/24	0700		Plastic 1L pH<2 w/HNO3 (Sub)	1	MW-10D	g / c	Radium Total (sub)
				Preservation Check: pH: _____				
4101343-21 J	10/02/24	0700		AG 250mL pH<2 w/H2SO4	1	MW-10D	g / c	TOC
				Preservation Check: pH: _____				
4101343-22 A	10/02/24	0700		CG 250mL pH<2 w/HCl Field Blank	1	Mercury Field Blank MW-10D	g / c	Mercury Tot 245.7 Field Blank

Preservation Check Performed by: MK

pH Paper Lot #: 228022

Field data collected by: Dave Medley Date (mm/dd/yy) 10/02/24 Time (24 hr) 0700
pH 6.22 Cond (umho) 3.45 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____
Temp (oC) _____ or (oF) _____ Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____
Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature) [Signature]

Received by: (Signature) [Signature]

Date (mm/dd/yy) 10/2/24

Time (24 hr) 1008

Chain of Custody

Scheduled for: 10/01/2024



Client: Big Rivers Electric Corporation Wilson Station

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: Wilson Groundwater Wells 092-00004

Phone: (270) 844-6000

PWS ID#:

State: Ky

PO#:

Quote#

Please Print Legibly

Collected by (Signature): Ashley Hall

Compliance Monitoring? Yes ☒ No ☐

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Samples Chlorinated? Yes ☐ No ☒

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY Workorder # 4101343 Sample ID#	*required information*		Bottle and Preservative	Containers	Sample Description	Composite	Sample Analysis Requested
	Date (mm/dd/yy):	Collection Time (24 hr):					
4101343-33 A	10/2/24	0710	Plastic 1L	1	MW-112	g / c	Alkalinity Bicarbonate Alkalinity Carbonate TDS Sulfate 300.0 Alkalinity Total Fluoride 300.0 Chloride 300.0 Conductivity (Lab) Calcium Tot 6010B Arsenic Tot 6020 Cadmium Tot 6020 Boron Tot 6010B Chromium Tot 6020 Barium Tot 6020 Lithium Tot 6020 Antimony Tot 6020 Beryllium Tot 6020 Cobalt Tot 6020 Copper Tot 6020 Lead Tot 6020 Zinc Tot 6020 Magnesium Tot 6010B Molybdenum Tot 6020
4101343-33 B	10/2/24	0710	Plastic 500mL pH<2 w/HNO3	1	MW-112	g / c	
Preservation Check: pH: ☒							
4101343-33 C	10/2/24	0710	Plastic 500mL pH<2 w/H2SO4	1	MW-112	g / c	COD TOC
Preservation Check: pH: ☒							
4101343-33 D	10/2/24	0710	CG 250mL pH<2 w/HCL	1	MW-112	g / c	Mercury Tot 245.7
4101343-33 E	10/2/24	0710	CG 250mL pH<2 w/HCL	1	MW-112	g / c	Mercury Tot 245.7

Preservation Check Performed by: MK

pH Paper Lot #: 228022

Field data collected by: Ashley Hall Date (mm/dd/yy) 10/2/24 Time (24 hr) 0710
pH 10.78 Cond (umho) 1.44 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____
Temp (oC) 10.24 or (oF) _____ Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____
Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Ashley Hall
Tina. S. S. S.

Tina. S. S. S.
10/2/24

10-2-24
10/2/24

9:00
1008

Chain of Custody

Scheduled for: 10/01/2024



Client: Big Rivers Electric Corporation Wilson Station

Report To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Invoice To:
Big Rivers Electric Corporation Wilson Station
Dawn Storckman
PO Box 24
Henderson, KY 42419

Project: Wilson Groundwater Wells 092-00004
Thermometer Serial Number

230753815
240381205
Temperature 2.6°C

Phone: (270) 844-6000
PWS ID#:
State: KY

PO#:
Quote#

Please Print Legibly

Collected by (Signature): Ashley Hall
required information

Compliance Monitoring? Yes ☒ No ☐

Samples Chlorinated? Yes ☐ No ☒

*For composite samples please indicate begin time, end time and temp(oC) at end time below:

Influent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

Effluent: Start Date _____ Start time _____ End Date _____ End Time _____ Temp (oC) _____

LAB USE ONLY	*required information*		Containers	Sample Description	Composite	Sample Analysis Requested
Workorder #	Date	Collection				
4101343	(mm/dd/yy):	Time (24 hr):	Bottle and Preservative			
Sample ID#						
4101343-33 F	10/2/24	0710	Plastic 1L pH<2 w/HNO3 Rad 226 (Sub)	1	MW-112 g / c	Radium 226 (sub)
			Preservation Check: pH: ☒			
4101343-33 G	10/2/24	0710	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW-112 g / c	Radium 228 (sub)
			Preservation Check: pH: ☒			
4101343-33 H	10/2/24	0710	Plastic 1L pH<2 w/HNO3 Rad 228 (Sub)	1	MW-112 g / c	Radium 228 (sub)
			Preservation Check: pH: ☒			
4101343-33 I	10/2/24	0710	Plastic 1L pH<2 w/HNO3 (Sub)	1	MW-112 g / c	Radium Total (sub)
			Preservation Check: pH: ☒			
4101343-33 J	10/2/24	0710	AG 250mL pH<2 w/H2SO4	1	MW-112 g / c	TOC
			Preservation Check: pH: ☒			
4101343-34 A	10/2/24	0710	CG 250mL pH<2 w/HCl Field Blank	1	Mercury Field Blank MW-112 g / c	Mercury Tot 245.7 Field Blank

Preservation Check Performed by: MK

pH Paper Lot #: 228022

Field data collected by: Ashley Hall Date (mm/dd/yy) 10/2/24 Time (24 hr) 0710
pH 10.78 Cond (umho) 1.44 Res Cl (mg/L) _____ Tot Cl (mg/L) _____ Free Cl (mg/L) _____
Temp (oC) 11.24 or (oF) _____ Static Water Level _____ DO (mg/L) _____ Turb. (NTU) _____
Flow: _____ ☐ MGD ☐ CFS ☐ g/min ☐ GPD

Relinquished by: (Signature)

Received by: (Signature)

Date (mm/dd/yy)

Time (24 hr)

Ashley Hall
Tim. hand

Tim. hand
10/2/24

10-2-24
10/2/24

9:00
1008

APPENDIX D – DATA VALIDATION

Memorandum



Date: June 4, 2024

To: Christopher Hoglund

From: Omkar Parab

Re: Quality Assurance/Quality Control (QA/QC) Review of Analytical Data
BREC Wilson, Ohio County, Kentucky
Project No. 171134

Water samples were collected at the BREC Wilson Landfill Site in Ohio County, Kentucky, between April 16 and 17, 2024. The samples were analyzed by Pace Analytical Services of Madisonville, Kentucky (Pace Madisonville) and Pace Analytical of Greensburg, Pennsylvania (Pace Greensburg) for one or more of the following parameters:

Parameter	Analytical Method	Laboratory
Metals	SW846 6010 B SW846 6020 A	Pace - Madisonville
Mercury	EPA 245.7 REV 2	
Total Dissolved Solids (TDS)	2540 C-2015	
Anions chloride, fluoride, sulfate	EPA 300.0 REV 2.1	
Total Organic Carbon (TOC)	5310 C-2014	
Alkalinity Bicarbonate/carbonate alkalinity as CaCO ₃ Total alkalinity	2320 B-2011	
Hardness as CaCO ₃	2340 C (as HACH 8226)	
Specific Conductance	2510 B-2011	
Chemical Oxygen Demand (COD)	HACH Method 8000	
Radium-226 Radium-228 *total calculated from radium-226 + radium-228 analyses.	EPA 903.1 EPA 904 Total Radium by calculation	Pace - Greensburg

The QA/QC results in association with the samples collected, were examined for any method-specific requirements. Data qualifiers, when appropriate, were added to the data as recommended in the United States Environmental Protection Agency's (USEPA's) *National Functional Guidelines for Inorganic Superfund Methods Data Review* (NFGI, 2020). The QA/QC review results are discussed below, and the qualifiers added during this review are summarized in Table 1.

1. Chain-of-Custody (COC) –The relinquished and received signatures, times, and dates were present on the COCs for all samples sent from the field to Pace-Madisonville. For the Pace-Madisonville to Pace-Greensburg transfer, the lab noted that no dates or times were included on the MS/MSD sample bottles. And, additionally, the lab noted that no samples were specified on the COC for the MS/MSD collected at MW5.
2. Requested Analyses Completed – All analyses were completed as requested.

Memorandum *(continued)*



June 4, 2024

Page 2

3. Holding Times – For sample MW7, the initial analysis for TDS was within the holding time. However, the initial analysis had QC issues, and the reanalysis was performed outside the holding time. The reported result was from the reanalysis, and it was qualified as estimated (J) due to the holding time exceedance. All other samples/analyses were completed within their recommended holding time.
4. Sample Preservation – All samples were received at $<6^{\circ}\text{C}$ for both labs, and none were frozen. No data qualifiers were necessary.

All radium samples (except MW4D, MW7, MW8, MW10, MW-114, and Well Duplicate 2 [MW-110]) were noted as lacking appropriate preservation of a pH less than 2 ($\text{pH}<2$). Upon arrival, Pace Greenburg added 2.5 milliliter (ml) nitric acid (HNO_3). However, because this preservation was added approximately 6 days after sample collection, the affected sample/result pairs were all qualified as estimated (J).

5. Field Blank – Field blanks assess the potential for cross-contamination during the sample activities and/or transport. For this review, the field blank was associated with samples collected on 04/17/2024, which included MW4D, MW5, and MW-10D. The following field blank detections were noted during this review:

- Antimony, zinc, mercury, alkalinity (total and bicarbonate), COD, specific conductance, hardness as CaCO_3 , TDS and TOC were detected in the sample Field Blank. Any low-level (J-flagged) detections of these analytes in the associated samples were qualified as non-detect (JU), while any detections greater than the reporting limit (RL) but less than five times the respective blank concentration were qualified as estimated potential high bias (J+). No qualifiers were added for detections greater than five times the respective blank concentration. (see below for qualifiers added based on these blank detections)
- Radium 226, radium 228, and total radium detections were reported in this field blank. For this blank review, estimated (J) qualifiers (rather than non-detect qualifiers) were added to the associated samples due to the uncertainty associated with these analytes.

The following summarizes the review of these analytes based on these above-noted field blank detections:

- Sample MW5 yielded a low-level (J-flagged) zinc detection; therefore, the noted samples were qualified as non-detect (JU). Sample and MW10D yielded a zinc detection greater than the RL but less than five times the field blank concentration. Hence, the samples were qualified as estimated potential high bias (J+).
- Sample and MW4D yielded a low-level (J-flagged) mercury detection; therefore, the noted samples were qualified as non-detect (JU).

Memorandum *(continued)*



June 4, 2024

Page 3

- All alkalinity results (total and bicarbonate) for the above-noted associated samples were greater than five times the field blank detection; hence, no qualifiers were required.
- Samples MW4D, and MW5 yielded a COD detection greater than the RL but less than five times the field blank concentration. Hence, the samples were qualified as estimated potential high bias (J+). Sample and MW10D yielded a low-level (J-flagged) COD detection; therefore, the noted samples were qualified as non-detect (JU).
- All specific conductance and hardness as CaCO₃ results for the above-noted associated samples were greater than five times the field blank detection; hence, no qualifiers were required.
- Samples MW4D, and MW10D, yielded a TOC detection greater than the RL but less than five times the field blank concentration. Hence, the samples were qualified as estimated potential high bias (J+).
- All radium results for the above-noted associated samples were qualified as estimated (J) since most were less than five times the respective field blank concentration. For the few radium 226 results not greater than five times the negative field blank result, professional judgment was used. These results were also qualified estimated (J) due to the uncertainty factor which would result in a concentration less than five times said field blank concentration.

Mercury field blanks were also submitted for each sample. Since mercury was non-detect in all the mercury field blanks, no qualifiers were required.

6. Method Blanks – Method blanks assess the potential for cross-contamination during the sample preparation and/or analysis. The following method blank detections were noted during this review:

- Sulfate was detected in the laboratory blank in QC batch BDD3022. Associated samples MW6, MW7, MW8, MW-10D, MW102, MW104, and MW-105R exhibited detections greater than five times the method blank concentration; hence, no qualifiers were required. Sulfate was non-detect in the associated sample MW10; hence, no qualifier was required.
- Radium: Radium-226 and radium-228 were detected in all method blanks. Because of the uncertainty associated with radium results, the review criteria were slightly altered to account for this. For any associated radium-226 or radium-228 detection less than five times the corresponding method blank concentration plus its uncertainty, the respective result was qualified as estimated (J). Additionally, because this result was used in the

Memorandum *(continued)*



June 4, 2024

Page 4

calculation to report total radium, the total radium result for said sample was also qualified as estimated (J). Based on this, all samples (except the field blank) were qualified and estimated (J) for the radium fractions. Note, several samples were previously qualified estimated (J) for the preservation issues noted by the lab and/or field blank detections.

Note, blanks are not typically qualified based on other blanks. Therefore, the field blank was excluded from this qualification.

7. Laboratory Control Samples (LCS) – The LCS contains a matrix similar to that of the sample that has been spiked with known concentrations of target analytes. The LCS is prepared and analyzed by the same method as the samples. As a measure of analytical accuracy, the results of the LCS are compared against the known analyte concentrations in the spike to determine percent recovery (REC). The purpose of the LCS is to determine the performance of the laboratory with respect to analyte recovery, independent of field sample matrix interference.

All LCS RECs were within their respective QC limits, except for the following:

- The LCS REC was below the QC limit for sodium in QC batch BDD2306. Associated samples MW110, MW-111, MW-112, MW-113, MW-114, and Well Duplicate 2 were qualified as estimated potential low bias (J-). The associated Field Blank sample was qualified as estimated at the reporting limit (UJ) as the noted analyte was non-detect in this sample.
8. Matrix Spike/Matrix Spike Duplicates (MS/MSD) – MS/MSDs are typically run for organic and inorganic analyses. A sample is split into three portions (original, MS and MSD), and a known amount of a target analyte is added (spiked) to two portions (MS and MSD) of the sample. The results of these two portions are compared with each other for reproducibility using the relative percent difference (RPD). They are also compared against the unspiked portion of the sample for REC of the spike. For one or more MS/MSDs, the lab could not calculate a REC and no result was reported. The following site-specific MS/MSD results were outside their respective control limits and qualified as noted (see also Table 1 for all qualifications added).
 - MS/MSD RECs performed on sample MW5:
 - The MS/MSD RECs for lithium were below the control limits. The lithium detection in the spiked parent sample was qualified as estimated potential low bias (J-).
 - The MSD REC for beryllium was below the control limit. The spiked parent sample was non-detect for beryllium and was qualified as estimated at the reporting limit (UJ).

Memorandum *(continued)*



June 4, 2024

Page 5

- The MSD REC for arsenic was above the control limit. The arsenic detection in the spiked parent sample was qualified as estimated potential high bias (J+).
- The MS/MSD RECs for magnesium and MS REC for calcium were reported as 'NR'. The MSD REC for calcium was below the control limits, and the MS/MSD RECs for sodium were below the control limits. The lab spike amounts were less than $\frac{1}{4}$ the concentration of the parent sample for magnesium, calcium, and sodium. Therefore, these MS/MSD results were inconclusive, and no qualifiers were added.
- The MS/MSD RECs for mercury were below the control limits. The spiked parent sample was non-detect for mercury and was qualified as estimated at the reporting limit (UJ).
- The MS REC for total alkalinity was below the control limit. The lab spike amounts were less than $\frac{1}{4}$ the concentration of the parent sample for total alkalinity. Therefore, these MS/MSD results were inconclusive, and no qualifiers were added.
- The MS/MSD RECs for chloride and fluoride were below the control limit. The MS/MSD RPD for fluoride was also above the control limit. The chloride detection in the spiked parent sample was qualified as estimated potential low bias (J-). The fluoride detection in the spiked parent sample was qualified as estimated (J).
- The MS REC for sulfate was below the control limit, and the MSD REC for sulfate was reported as 'NR'. The lab spike amounts were less than $\frac{1}{4}$ the concentration of the parent sample for sulfate. Therefore, these MS/MSD results were inconclusive, and no qualifiers were added.
- MS/MSD RECs performed on sample Well Duplicate 2:
 - The MS REC for calcium was below the control limit. The MS/MSD RECs for sodium were below the control limits. The lab spike amounts were less than $\frac{1}{4}$ the concentration of the parent sample for calcium and sodium. Therefore, these MS/MSD results were inconclusive, and no qualifiers were added.
 - The lab also performed a PDS on this same sample, and the PDS RECs for one or more samples were outside control limits. This is an upper-level review item and necessary qualifiers were applied based on the MS/MSD review. No additional qualifiers were added based solely on these PDS results.
 - The MS REC for total alkalinity was below the control limit. The total alkalinity detection in the spiked parent sample was qualified as estimated potential low

Memorandum *(continued)*



June 4, 2024

Page 6

bias (J-). Since the MS/MSD RECs were performed on a field duplicate sample, the parent sample (MW110) was also qualified for the noted analyte.

- MS/MSD RECs performed on sample MW-105R:
 - The MS/MSD RECs for lithium were below the control limits. The lithium detection in the spiked parent sample was qualified as estimated potential low bias (J-).

The lab also performed a PDS on this same sample. The PDS REC for lithium was reported as 'NR'. The noted spiked sample was qualified previously based on the MS/MSD for this analyte, no actions were necessary.

- The MS REC for sulfate was below the control limit and MSD REC was reported as 'NR'. Since the results for the parent sample were reported at dilution, the results were inconclusive, and no qualification was required.
- MS/MSD RECs performed on sample MW104:
 - The MS/MSD RECs of mercury were below the control limits. The mercury detection in the spiked parent sample was qualified as estimated potential low bias (J-).
- MS REC performed on sample MW-114:
 - The MS REC for total alkalinity was below the control limit. The lab spike amounts were less than ¼ the concentration of the parent sample for total alkalinity. Therefore, these MS/MSD results were inconclusive, and no qualifiers were added.

All the other site-specific MS/MSD RECs and/or RPDs were within their respective QC limits.

9. Laboratory Duplicates – Laboratory duplicates were performed to evaluate analytical precision between samples when an MS/MSD may not be appropriate. Only project-specific laboratory duplicates were compared and used for qualification.

All the site-specific laboratory duplicates were within QC limits.

10. Field Duplicate Results – Field duplicate results provide information on the ability to reproduce field results and account for errors introduced from handling, shipping, storage, preparation, and analysis of field samples. There are no specific USEPA criteria for qualifying data from field duplicate results. Depending upon the sample concentration, one of the following criteria based upon NFGI is applicable:

Memorandum *(continued)*



June 4, 2024

Page 7

- Is the compound detected in both portions?
- If the sample concentrations are greater than 5 times the detection limit, then the maximum allowable RPD is 20 percent for water samples.
- If the sample concentrations are less than 5 times the detection limit, then a sensitivity test is applied. For the sensitivity test, the sample concentrations must agree within $\pm$ the lower detection limit for water samples.
- If the radium results are reported above their minimum detectable concentration (MDC), the normalized difference (also called the relative error ratio) between the duplicate pair was calculated. The maximum normalized difference is 1.96 for the radium samples.

The following field duplicate pairs were included in this review, and detections are presented on Table 2:

- MW110 / Well Duplicate 2 (collected 4/16/2024): Iron, arsenic, and barium did not meet the duplication criteria since they yielded an elevated RPD. As such, the parent/duplicate pair was qualified as estimated (J) for these analytes.
 - General: The field duplicate pairs exhibited variable differences in the radium results due to their associated uncertainty. As noted previously, all radium results were qualified estimated (J) for one or more reasons. As such, no further qualifiers were added for these results based solely on the field duplicate review.
11. Detection and Quantitation Limits – Dilutions were required to account for high concentrations of target analytes and/or matrix interferences in one or more samples (indicated by “D” qualifiers added by the lab). RLs were adjusted accordingly, and no data review qualifiers were added based on these dilutions.
 12. Miscellaneous – The lab flagged one or more results out for calibration issues. The calibration information was not provided and was not included in this scope of review (flagged “V1” by the laboratory). No data review qualifiers were added based solely on these calibration flags.
 13. Conclusion – The data were reviewed for achievement of any method-specified QA/QC criteria. The data are valid for use, as qualified, in reporting the results of this investigation.

Attachments

Table 1 – Data Qualifier Table

Table 2 – Field Duplicate Comparison – Detections Only

Table 1
Data Qualifier Table
BREC Wilson - April 2024 Sampling Event
Ohio County, Kentucky

Analytical Method	Analyte(s)	Sample Identification	Data Validation Qualifier	Reason(s) for Qualification
EPA 903.1 EPA 904.0 Total Radium	Radium 226 Radium 228 Total Radium	MW4D	J	Field/Method blank detection
EPA 245.7 REV 2	Mercury		JU	Field blank detection
5310 C-2014	TOC		J+	Field blank detection
HACH 8000	COD		J+	Field blank detection
EPA 903.1 EPA 904.0 Total Radium	Radium 226 Radium 228 Total Radium	MW5	J	Inadequate preservation Method blank detection
HACH 8000	COD		J+	Field blank detection
SW846-6020 A	Zinc		JU	Field blank detection
SW846-6020 A	Lithium		J-	MS/MSD RECs < QC Limits
SW846-6020 A	Beryllium		UJ	MSD REC < QC limit
SW846-6020 A	Arsenic		J+	MSD REC > QC limit
EPA 245.7 REV 2	Mercury		UJ	MS/MSD RECs < QC Limits
EPA 300.0 REV 2.1	Chloride		J-	MS/MSD RECs < QC Limits
EPA 300.0 REV 2.1	Fluoride		J-	MS/MSD RECs < QC Limits MS/MSD RPD > QC limit
EPA 903.1 EPA 904.0 Total Radium	Radium 226 Radium 228 Total Radium	MW6	J	Inadequate preservation Method blank detection
EPA 903.1 EPA 904.0 Total Radium	Radium 226 Radium 228 Total Radium	MW7	J	Inadequate preservation Field/Method blank detection
2540 C-2015	TDS		J	Holding time exceedance
EPA 903.1 EPA 904.0 Total Radium	Radium 226 Radium 228 Total Radium	MW8	J	Method blank detection
EPA 903.1 EPA 904.0 Total Radium	Radium 226 Radium 228 Total Radium	MW10	J	Method blank detection
EPA 903.1 EPA 904.0 Total Radium	Radium 226 Radium 228 Total Radium	MW-10D	J	Inadequate preservation Field/Method blank detection
5310 C-2014	TOC		J+	Field blank detection
HACH 8000	COD		JU	Field blank detection
SW846-6020 A	Zinc		J+	Field blank detection
EPA 903.1 EPA 904.0 Total Radium	Radium 226 Radium 228 Total Radium	MW102	J	Inadequate preservation Method blank detection
EPA 903.1 EPA 904.0 Total Radium	Radium 226 Radium 228 Total Radium	MW104	J	Inadequate preservation Method blank detection
EPA 245.7 REV 2	Mercury		J-	MS/MSD RECs < QC Limits
EPA 903.1 EPA 904.0 Total Radium	Radium 226 Radium 228 Total Radium	MW-105R	J	Inadequate preservation Method blank detection
SW846-6020 A	Lithium		J-	MS/MSD RECs < QC Limits
EPA 903.1 EPA 904.0 Total Radium	Radium 226 Radium 228 Total Radium	MW110	J	Inadequate preservation Method blank detection
SW846 6010 B	Sodium		J-	LCS REC < QC limit
SW846 6010 B	Iron		J	Parent/ Duplicate Failed RPD test
2320 B-2011	Total alkalinity		J-	MS REC < QC limit
SW846-6020 A	Arsenic		J	Parent/ Duplicate Failed RPD test
SW846-6020 A	Barium		J	Parent/ Duplicate Failed RPD test

Table 1
Data Qualifier Table
BREC Wilson - April 2024 Sampling Event
Ohio County, Kentucky

Analytical Method	Analyte(s)	Sample Identification	Data Validation Qualifier	Reason(s) for Qualification
EPA 903.1 EPA 904.0 Total Radium	Radium 226 Radium 228 Total Radium	MW-111	J	Inadequate preservation Method blank detection
SW846 6010 B	Sodium		J-	LCS REC < QC limit
EPA 903.1 EPA 904.0 Total Radium	Radium 226 Radium 228 Total Radium	MW-112	J	Inadequate preservation Method blank detection
SW846 6010 B	Sodium		J-	LCS REC < QC limit
EPA 903.1 EPA 904.0 Total Radium	Radium 226 Radium 228 Total Radium	MW-113	J	Inadequate preservation Method blank detection
SW846 6010 B	Sodium		J-	LCS REC < QC limit
EPA 903.1 EPA 904.0 Total Radium	Radium 226 Radium 228 Total Radium	MW-114	J	Method blank detection
SW846 6010 B	Sodium		J-	LCS REC < QC limit
EPA 903.1 EPA 904.0 Total Radium	Radium 226 Radium 228 Total Radium	Well Duplicate 2	J	Method blank detection
2320 B-2011	Total alkalinity		J-	MS REC < QC limit
SW846 6010 B	Sodium		J-	LCS REC < QC limit
SW846 6010 B	Iron		J	Parent/ Duplicate Failed RPD test
SW846-6020 A	Arsenic		J	Parent/ Duplicate Failed RPD test
SW846-6020 A	Barium		J	Parent/ Duplicate Failed RPD test
EPA 903.1 EPA 904.0 Total Radium	Radium 226 Radium 228 Total Radium	Field Blank	J	Inadequate preservation
SW846 6010 B	Sodium		JU	LCS REC < QC limit

Notes:

CaCO₃ = Calcium Carbonate

COD = Chemical oxygen demand

EPA = Environmental Protection Agency

J = Qualified as estimated during data review

J- = Qualified as estimated potential low bias during data review

J+ = Qualified as estimated potential high bias during data review

JU = Low-level detection was qualified as nondetect during data review

LCS = Laboratory Control Sample

MS/MSD = Matrix spike/Matrix spike duplicate

MW = Monitoring Well

PDS = Post digestion spike

QC = Quality Control

REC = Percent Recovery

RPD = Relative Percent Difference

TOC = Total organic carbon

UJ = Nondetect result was qualified as estimated at the reporting limit during data review

Table 2
Field Duplicate Comparison - Detections Only
BREC Wilson - April 2024 Sampling Event
Ohio County, Kentucky

Sample ID: Lab ID: Date:	MW110 4042964-29 4/16/2024	Well Duplicate 2 4042964-41 4/16/2024	Units	Meets QC
Bicarbonate Alkalinity as CaCO ₃	151	147	mg/L	Yes
Total Alkalinity	151 J-	147 J-	mg/L	Yes
Hardness as CaCO ₃	175	174	mg/L	Yes
Specific Conductance (Lab)	544	505	umhos/cm	Yes
Total Dissolved Solids	316	260	mg/L	Yes
Total Organic Carbon	2.1	1.6	mg/L	Yes
Chloride	11.7	10.9	mg/L	Yes
Fluoride	0.28	0.3	mg/L	Yes
Sulfate	82.5	72.9	mg/L	Yes
(Radium 226)	0.937 J	1.06 J	pCi/L	See Text
Radium (228)	0.602 J	1.12 J	pCi/L	See Text
Total Radium	1.54 J	2.18 J	pCi/L	See Text
Calcium	47.1	41.90	mg/L	Yes
Iron	7.85 J	4.57 J	mg/L	No, (RPD 53%)
Copper	0.001 J	0.003 U	mg/L	Yes
Antimony	0.003 J	0.002 J	mg/L	Yes
Magnesium	25.8	21.5	mg/L	Yes
Sodium	31.4 J-	28 J-	mg/L	Yes
Arsenic	0.0062 J	0.0025 J	mg/L	No, (RPD 85%)
Barium	0.076 J	0.06 J	mg/L	No, (RPD 24%)
Zinc	0.009 J	0.006 J	mg/L	Yes
Potassium	0.5	0.52	mg/L	Yes
Chemical Oxygen Demand	13	11 J	mg/L	Yes

Notes:

CaCO₃ = Calcium Carbonate

ID = identification

J = Estimated value / Qualified as estimated

J- = Qualified as estimated biased low

J+ = Qualified as estimated biased high

JU = Estimated trace concentration was qualified as non detect

mg/L = milligrams per liter

MW = Monitoring Well

ng/L = nanograms per liter

pCi/L = picoCurie per liter

QC = Quality Control

RPD = Relative Percent Difference

U = Compound was not detected

umhos/cm = microsiemens per centimeter

Memorandum



Date: November 26, 2024

To: Christopher Hoglund

From: Omkar Parab

Re: Quality Assurance/Quality Control (QA/QC) Review of Analytical Data
2H – 2024 Sampling Event (September/October 2024)
BREC Wilson, Ohio County, Kentucky
Project No. 171134

Groundwater samples were collected at the BREC Wilson Landfill Site in Ohio County, Kentucky, between September 30 and October 2, 2024. The samples were analyzed by Pace Analytical Services of Madisonville, Kentucky (Pace Madisonville) and Pace Analytical of Greensburg, Pennsylvania (Pace Greensburg) for one or more of the following parameters:

Parameter	Analytical Method	Laboratory
Metals	SW846 6010 B SW846 6020 A	Pace - Madisonville
Mercury	EPA 245.7 REV 2	
Total Dissolved Solids (TDS)	2540 C-2015	
Anions chloride, fluoride, sulfate	EPA 300.0 REV 2.1	
Total Organic Carbon (TOC)	5310 C-2014	
Alkalinity Bicarbonate/carbonate alkalinity as CaCO ₃	2320 B-2011	
Total alkalinity		
Hardness Calculation as CaCO ₃	2340 B-1997	
Specific Conductance	2510 B-2011	
Chemical Oxygen Demand (COD)	HACH Method 8000	
Radium-226 Radium-228 *total calculated from radium-226 + radium-228 analyses.	EPA 903.1 EPA 904 Total Radium by calculation	Pace - Greensburg

The QA/QC results in association with the samples collected were examined for any method-specific requirements. Data qualifiers, when appropriate, were added to the data as recommended in the United States Environmental Protection Agency's (USEPA's) *National Functional Guidelines for Inorganic Superfund Methods Data Review* (NFGI, 2020). The QA/QC review results are discussed below, and the qualifiers added during this review are summarized in Table 1.

1. Chain-of-Custody (COC) –The relinquished and received signatures, times, and dates were present on the COCs for all samples sent from the field to Pace Madisonville. For samples sent from Pace Madisonville to Pace Greensburg, the lab noted that the lab report was revised to add sample identifications (IDs) and radium QC data.

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Pace-Greensburg also noted that no signatures were on the COCs sent between the laboratories, and no dates/times were noted on the bottles. Sample information was obtained from the primary COCs sent from the field to Pace Madisonville. No qualifiers were added based on these laboratory notes.

2. Requested Analyses Completed – All analyses were completed as requested.
3. Holding Times – All samples/analyses were completed within their recommended holding time.
4. Sample Preservation – All samples sent to Pace Madisonville were received at <6 degrees Celsius (°C) and none were frozen. The radium samples sent to Pace Greensburg did not require thermal preservation. No data qualifiers were necessary.

All radium samples (except MW1, MW4, MW4D, MW5, MW10, MW10D, MW105R, MW110, MW112, MW114, Well Duplicate 1, and FIELD BLANK.) were noted as lacking appropriate preservation of a pH less than 2 (pH<2). Upon arrival, Pace Greenburg added 5.0 milliliter (ml) of nitric acid (HNO₃). However, because this preservation was added approximately one to three (1 -3) days after sample collection, the affected sample/result pairs were all qualified as estimated (J).

5. Field Blank – Field blanks assess the ambient air conditions at the site at the time of sampling. For this review, the field blank was collected at MW5 and was associated with this well. The following field blank detections were noted during this review:
 - Specific conductance, TDS, and TOC were detected in the ambient air sample Field Blank. All specific conductance, TDS, and TOC results in the associated sample MW5 were greater than five times their field blank detection; hence, no qualifiers were required.
 - Mercury was detected in the ambient air sample Field Blank. This detection was above the reporting limit and was determined to be questionable. The lab was contacted to confirm this mercury detection, as well as those in the field samples. Further details summarizing the course of action based on these mercury detections are noted in Section 11.
 - Radium 226, radium 228, and total radium detections were reported in ambient air sample Field Blank. For this blank review, estimated (J) qualifiers (rather than non-detect qualifiers) were added to the associated sample due to the uncertainty associated with these analytes.

All radium results for MW5 were qualified as estimated (J) since they were less than five times the respective field blank concentration. This qualification was also applied based on the uncertainty factor that could also result in a concentration less than five times said field blank concentration.

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6. Method Blanks – Method blanks assess the potential for cross-contamination during the sample preparation and/or analysis. The following method blank detections were noted during this review:
 - Copper and zinc were detected in the laboratory blank in QC batch BDJ0402. Associated sample MW-112 yielded a low-level (J-flagged) copper detection; therefore, the noted sample was qualified as non-detect (JU). Copper was non-detect in all other associated samples MW4, MW6, and MW-10D; hence, no qualifier was required. Associated samples MW6, MW-10D, and MW-112 yielded a low-level (J-flagged) zinc detection; therefore, the noted samples were qualified as non-detect (JU). Sample MW4 yielded a zinc detection greater than the reporting limit but less than five times the method blank concentration. Hence, the sample was qualified as estimated potential high bias (J+).
 - Radium: Radium-226 and radium-228 were detected in all method blanks. Because of the uncertainty associated with radium results, the review criteria were slightly altered to account for this. For any associated radium-226 or radium-228 detection less than five times the corresponding method blank concentration plus its uncertainty, the respective result was qualified as estimated (J). Additionally, because this result was used in the calculation to report total radium, the total radium result for said sample was also qualified as estimated (J). Based on this, all samples (except the field blank) were qualified and estimated (J) for the radium fractions as part of this method blank review. Note, several samples were previously qualified estimated (J) for the preservation issues noted by the lab. The field blank was not qualified since blanks are not typically qualified based on other blanks. Therefore, the field blank was excluded from this method blank review qualification.
7. Laboratory Control Samples (LCS) – The LCS contains a matrix similar to that of the sample that has been spiked with known concentrations of target analytes. The LCS is prepared and analyzed by the same method as the samples. As a measure of analytical accuracy, the results of the LCS are compared against the known analyte concentrations in the spike to determine percent recovery (REC). The purpose of the LCS is to determine the performance of the laboratory with respect to analyte recovery, independent of field sample matrix interference.

All LCS RECs were within their respective QC limits.
8. Matrix Spike/Matrix Spike Duplicates (MS/MSD) – MS/MSDs are typically run for organic and inorganic analyses. A sample is split into three portions (original, MS and MSD), and a known amount of a target analyte is added (spiked) to two portions (MS and MSD) of the sample. The results of these two portions are compared with each other for reproducibility using the relative percent difference (RPD). They are also compared against the unspiked portion of the sample for REC of the spike. For one or more MS/MSDs, the lab could not calculate a REC and no result was reported. Additionally, for several of the metals, there was one or more MS/MSDs performed on a particular site-specific sample. Qualification for these instances was based on

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professional judgment. The following site-specific MS/MSD results were outside their respective control limits and qualified as noted (see also Table 1 for all qualifications added).

- MS/MSD RECs performed on sample MW1:

The MS/MSD spike amounts for calcium, magnesium, nickel, and sodium were less than $\frac{1}{4}$ the respective concentration for the noted parent sample. Additionally, the lab performed a post-digestive spike (PDS) on this same parent sample, also not meeting the $\frac{1}{4}$ criteria. As such, no conclusion could be made for this MS/MSD. The associated LCS was within limits and no further actions were necessary. No qualifiers were added based on the MS/MSD or PDS for these metals.

Also, for zinc, although the $\frac{1}{4}$ criteria was met for the MS/MSD, the results were flagged "E" by the lab indicating they exceeded the calibration range of the instrument. The corresponding PDS exceeded its QC limit, and based on this, the zinc detection was qualified as estimated potential high bias (J+).

MS/MSD results were not reported for boron. This was due to low or no boron present in the spiked parent sample, as well as a low MS/MSD spike concentration. As such, no conclusion could be made for boron in this MS/MSD. The associated LCS was within limits and no further actions were necessary. No qualifiers were added based on this MS/MSD for this metal.

The MS REC was below the control limit and the MS/MSD RPD was above the control limit for potassium. The potassium detection in the spiked parent sample was qualified as estimated (J).

The MS REC for fluoride was below the control limit. The fluoride detection in the spiked parent sample was qualified as estimated potential low bias (J-). A corresponding MSD was also prepared; however, no result was reported. Upon further review, different spike amounts were used for this MSD. Qualification was based on the MS results for this analyte.

- MS/MSD RECs performed on sample MW102:

The MS/MSD spike amounts for calcium, magnesium and sodium were less than $\frac{1}{4}$ the respective concentration of the parent sample. As such, no conclusion could be made for this MS/MSD. The associated LCS was within limits and no further actions were necessary. No qualifiers were added based on this MS/MSD for these metals.

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- MS/MSD RECs performed on sample MW104:

The MS/MSD spike amounts for calcium, magnesium, and sodium were less than $\frac{1}{4}$ the respective concentration of the parent sample. Additionally, the lab performed a PDS on this same parent sample, also not meeting the $\frac{1}{4}$ criteria. As such, no conclusion could be made for this MS/MSD. The associated LCS was within limits, and no further actions were necessary. No qualifiers were added based on the MS/MSD or PDS for these metals.

The MS/MSD RECs for zinc were below the control limits. The spiked parent sample was non-detect for zinc and was qualified as estimated at the reporting limit (UJ).

MS/MSD results were not reported for boron. This was due to low or no boron present in the spiked parent sample, as well as a low MS/MSD spike concentration. However, the lab also performed a PDS the REC was below the control limit. Since this PDS was the only matrix-type QC sample, professional judgment was used and the spiked parent sample, which was non-detect for boron, was qualified as estimated at the reporting limit (UJ).

- MS/MSD RECs performed on sample MW6:

The MS/MSD spike amounts for calcium, magnesium, and sodium were less than $\frac{1}{4}$ the respective concentration of the parent sample. Additionally, the lab performed a PDS on this same parent sample, also not meeting the $\frac{1}{4}$ criteria. As such, no conclusion could be made for this MS/MSD. The associated LCS was within limits and no further actions were necessary. No qualifiers were added based on the MS/MSD or PDS for these metals.

MS/MSD results were not reported for boron. This was due to low or no boron present in the spiked parent sample, as well as a low MS/MSD spike concentration. While the lab also performed a PDS, the spike amount did not meet the $\frac{1}{4}$ criteria and no conclusion could be made. The associated LCS was acceptable, and no qualifiers were added based on the MS/MSD or PDS for this metal.

The MS/MSD RECs for mercury were below the control limits. The spiked parent sample was non-detect for mercury and was qualified as estimated at the reporting limit (UJ).

- MS/MSD RECs performed on sample MW3:

The MS REC for TOC was below the control limit. The TOC detection in the spiked parent sample was qualified as estimated potential high bias (J-). The

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field duplicate (Well Duplicate 2) collected at this sample location was also qualified for TOC.

The MS REC for total alkalinity was below the control limit. The spike amount was less than $\frac{1}{4}$ the concentration of the parent sample for total alkalinity. Therefore, no conclusion could be made for this MS. The associated LCS was within limits and no further actions were necessary. No qualifiers were added based on this MS result for this analyte.

- MS/MSD RECs performed on sample Well Duplicate 2:

The MS REC for total alkalinity was below the control limit. The spike amount was less than $\frac{1}{4}$ the concentration of the parent sample. Therefore, no conclusion could be made for this MS. The associated LCS was within limits and no further actions were necessary. No qualifiers were added based on this MS result for this analyte.

- MS/MSD RECs performed on sample MW-114:

The MS REC for total alkalinity was below the control limit. The spike amount was less than $\frac{1}{4}$ the concentration of the parent sample. Therefore, no conclusion could be made for this MS. No qualifiers were added based on this MS result for this analyte.

All other site-specific MS/MSD RECs and/or RPDs were within their respective QC limits.

9. Laboratory Duplicates – Laboratory duplicates were performed to evaluate analytical precision between samples when an MS/MSD may not be appropriate. Only project-specific laboratory duplicates were compared and used for qualification.

The laboratory used very low RPD QC limits for one or more methods. Professional judgment was used and the NFGI QC limit of 20% was used in these cases. Based on the review using this limit, all site-specific laboratory duplicates were within QC limits. No qualifiers were added for the laboratory duplicates flagged by the laboratory using the very low RPD QC limits (i.e., specific conductance).

10. Field Duplicate Results – Field duplicate results provide information on the ability to reproduce field results and account for errors introduced from handling, shipping, storage, preparation, and analysis of field samples. There are no specific USEPA criteria for qualifying data from field duplicate results. Depending upon the sample concentration, one of the following criteria based upon NFGI is applicable:

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- Is the compound detected in both portions?
- If the sample concentrations are greater than 5 times the reporting limit, then the maximum allowable RPD is 20 percent for water samples.
- If the sample concentrations are less than 5 times the reporting limit, then a sensitivity test is applied. For the sensitivity test, the sample concentrations must agree within $\pm$ the lower reporting limit for water samples.
- If the radium results are reported above their minimum detectable concentration (MDC), the normalized difference (also called the relative error ratio) between the duplicate pair was calculated. The maximum normalized difference is 1.96 for the radium samples.

The following field duplicate pairs were included in this review, and detections are presented on Table 2:

- MW110 / Well Duplicate 1 (collected 9/30/2024): All field duplicate results were adequately replicated, with the exception of COD, iron, arsenic, and barium, which did not meet the duplication criteria. Barium and iron yielded elevated RPDs, while COD and arsenic failed the sensitivity test. Hence, the parent/duplicate pair was qualified as estimated (J) for these analytes.
- MW3 / Well Duplicate 2 (collected 10/1/2024): All field duplicate results were adequately replicated, with the exception of iron and arsenic which did not meet the duplication criteria. Iron yielded an elevated RPD, while arsenic failed the sensitivity test. Hence, the parent/duplicate pair was qualified as estimated (J) for these analytes.
- General: Both field duplicate pairs exhibited variable differences in the radium results due to their associated uncertainty. As noted previously, all radium results were qualified estimated (J) for one or more reasons. As such, no further qualifiers were added for these results based solely on the field duplicate review.

11. Miscellaneous – As noted previously, the field blank and several wells for this 2H 2024 sampling event exhibited mercury detections that were not consistent with historical data. The ambient air sample (Field Blank) was collected at MW5 and yielded a concentration significantly over its reporting limit.

The laboratory was contacted to confirm these mercury results and indicated no presence of carryover was evident in the laboratory preparation and analysis procedures. However, corresponding mercury field blanks were also collected at each well, and these were all non-detect, further indicating suspicion of these mercury detections. Because of this, these detections were not rejected during the data validation based on the suspicion of carryover.

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All mercury detections were qualified as estimated (J) based on professional judgment. Verification sampling for these mercury detections will be performed in early 2025 at the next semiannual sampling event. At that time, if these mercury detections are no longer present, these 2H 2024 data may be revisited and rejected. The statistical analyses related to this 2H 2024 data will be discussed under separate cover, and these mercury results may ultimately be dismissed as anomalous results and excluded from subsequent statistical analyses following the verification sampling event next Spring.

12. Reporting Limits – Dilutions were required to account for high concentrations of target analytes and/or matrix interferences in one or more samples (indicated by “D” qualifiers added by the lab). The reporting limits were adjusted accordingly, and no data review qualifiers were added based on these dilutions.
13. Conclusion – The data were reviewed for achievement of any method-specified QA/QC criteria. The data are valid for use, as qualified, in reporting the results of this investigation.

Attachments

Table 1 – Data Qualifier Table

Table 2 – Field Duplicate Comparison – Detections Only

Table 1
Data Qualifier Table
BREC Wilson - September 2024 Sampling Event
Ohio County, Kentucky

Analytical Method	Analyte(s)	Sample Identification	Laboratory Number	Data Validation Qualifier	Reason(s) for Qualification
EPA 903.1 EPA 904.0 Total Radium	Radium 226 Radium 228 Total Radium	MW1	4101343-01	J	Method blank detection
EPA 245.7 REV 2	Mercury			J	See Text - Section 11 Professional Judgment
SW846 6010 B	Potassium			J	MS REC < QC limit MS/MSD RPD > QC limit
SW846-6020 A	Zinc			J+	PDS REC > QC limit
EPA 300.0 REV 2.1	Fluoride			J-	MS REC < QC limit
EPA 903.1 EPA 904.0 Total Radium	Radium 226 Radium 228 Total Radium	MW2	4101343-03	J	Inadequate preservation Method blank detection
EPA 245.7 REV 2	Mercury			J	See Text - Section 11 Professional Judgment
EPA 903.1 EPA 904.0 Total Radium	Radium 226 Radium 228 Total Radium	MW3	4101343-05	J	Inadequate preservation Method blank detection
5310 C-2014	TOC			J-	MS REC < QC limit
SW846 6010 B	Iron			J	Parent/ Field Duplicate discrepancy
SW846-6020 A	Arsenic			J	Parent/ Field Duplicate discrepancy
EPA 903.1 EPA 904.0 Total Radium	Radium 226 Radium 228 Total Radium	MW4	4101343-07	J	Method blank detection
EPA 245.7 REV 2	Mercury			J	See Text - Section 11 Professional Judgment
SW846-6020 A	Zinc			J+	Method blank detection
EPA 245.7 REV 2	Mercury	MW4D	4101343-09	J	See Text - Section 11 Professional Judgment
EPA 903.1 EPA 904.0 Total Radium	Radium 226 Radium 228 Total Radium			J	Method blank detection
EPA 903.1 EPA 904.0 Total Radium	Radium 226 Radium 228 Total Radium	MW5	4101343-11	J	Field blank detection Method blank detection
EPA 903.1 EPA 904.0 Total Radium	Radium 226 Radium 228 Total Radium	MW6	4101343-13	J	Inadequate preservation Method blank detection
SW846-6020 A	Zinc			JU	Method blank detection
EPA 245.7 REV 2	Mercury			UJ	MS/MSD RECs < QC Limits
EPA 903.1 EPA 904.0 Total Radium	Radium 226 Radium 228 Total Radium	MW7	4101343-15	J	Inadequate preservation Method blank detection
EPA 903.1 EPA 904.0 Total Radium	Radium 226 Radium 228 Total Radium	MW8	4101343-17	J	Inadequate preservation Method blank detection
EPA 245.7 REV 2	Mercury			J	See Text - Section 11 Professional Judgment
EPA 903.1 EPA 904.0 Total Radium	Radium 226 Radium 228 Total Radium	MW10	4101343-19	J	Method blank detection
EPA 245.7 REV 2	Mercury			J	See Text - Section 11 Professional Judgment
EPA 903.1 EPA 904.0 Total Radium	Radium 226 Radium 228 Total Radium	MW-10D	4101343-21	J	Method blank detection
SW846-6020 A	Zinc			JU	Method blank detection
EPA 245.7 REV 2	Mercury			J	See Text - Section 11 Professional Judgment
EPA 903.1 EPA 904.0 Total Radium	Radium 226 Radium 228 Total Radium	MW102	4101343-23	J	Inadequate preservation Method blank detection

Table 1
Data Qualifier Table
BREC Wilson - September 2024 Sampling Event
Ohio County, Kentucky

Analytical Method	Analyte(s)	Sample Identification	Laboratory Number	Data Validation Qualifier	Reason(s) for Qualification
EPA 903.1 EPA 904.0 Total Radium	Radium 226 Radium 228 Total Radium	MW104	4101343-25	J	Inadequate preservation Method blank detection
SW846-6020 A	Zinc			UJ	MS/MSD RECs < QC Limits
SW846 6010 B	Boron			UJ	PDS REC < QC limit
EPA 903.1 EPA 904.0 Total Radium	Radium 226 Radium 228 Total Radium	MW-105R	4101343-27	J	Method blank detection
EPA 903.1 EPA 904.0 Total Radium	Radium 226 Radium 228 Total Radium	MW110	4101343-29	J	Method blank detection
SW846-6020 A	Barium			J	Parent/ Field Duplicate discrepancy
SW846 6010 B	Iron			J	Parent/ Field Duplicate discrepancy
HACH Method 8000	COD			J	Parent/ Field Duplicate discrepancy
SW846-6020 A	Arsenic			J	Parent/ Field Duplicate discrepancy
EPA 903.1 EPA 904.0 Total Radium	Radium 226 Radium 228 Total Radium	MW-111	4101343-31	J	Inadequate preservation Method blank detection
EPA 903.1 EPA 904.0 Total Radium	Radium 226 Radium 228 Total Radium	MW-112	4101343-33	J	Method blank detection
SW846-6020 A	Copper			JU	Method blank detection
SW846-6020 A	Zinc			JU	Method blank detection
EPA 903.1 EPA 904.0 Total Radium	Radium 226 Radium 228 Total Radium	MW-113	4101343-35	J	Inadequate preservation Method blank detection
EPA 903.1 EPA 904.0 Total Radium	Radium 226 Radium 228 Total Radium	MW-114	4101343-37	J	Method blank detection
EPA 903.1 EPA 904.0 Total Radium	Radium 226 Radium 228 Total Radium	Well Duplicate 1	4101343-39	J	Method blank detection
SW846-6020 A	Barium			J	Parent/ Field Duplicate discrepancy
SW846 6010 B	Iron			J	Parent/ Field Duplicate discrepancy
HACH Method 8000	COD			J	Parent/ Field Duplicate discrepancy
SW846-6020 A	Arsenic			J	Parent/ Field Duplicate discrepancy
EPA 903.1 EPA 904.0 Total Radium	Radium 226 Radium 228 Total Radium	Well Duplicate 2	4101343-41	J	Inadequate preservation Method blank detection
5310 C-2014	TOC			J-	MS REC < QC limit
SW846 6010 B	Iron			J	Parent/ Field Duplicate discrepancy
SW846-6020 A	Arsenic			J	Parent/ Field Duplicate discrepancy

Notes:

COD = Chemical oxygen demand
EPA = Environmental Protection Agency
J = Qualified as estimated during data review
J- = Qualified as estimated potential low bias
J+ = Qualified as estimated potential high bias
JU = Low-level detection was qualified as nondetect
MS/MSD = Matrix spike/Matrix spike duplicate
MW = Monitoring Well
PDS = Post digestion spike
QC = Quality Control
REC = Percent Recovery
RPD = Relative Percent Difference
TOC = Total organic carbon
UJ = Nondetect result was qualified as estimated at the reporting limit during data review

Table 2
Field Duplicate Comparison - Detections Only
BREC Wilson - September 2024 Sampling Event
Ohio County, Kentucky

Sample ID: Lab ID: Date:	MW110 9/30/2024 4101343-29	Well Duplicate 1 9/30/2024 4101343-39	Units	Meets QC
Bicarbonate Alkalinity as CaCO ₃	145	152	mg/L	Yes
Total Alkalinity	145	152	mg/L	Yes
Hardness Calculation as CaCO ₃	184	169	mg/L	Yes
Specific Conductance (Lab)	452	436	uS/cm	Yes
Total Dissolved Solids	304	354	mg/L	Yes
Total Organic Carbon	2	1	mg/L	Yes
Chloride	10.2	11	mg/L	Yes
Fluoride	0.26	0.24	mg/L	Yes
Sulfate	69.1	74.6	mg/L	Yes
Radium-226	0.637 J	0.213 J	pCi/L	No
Radium-228	0.847 J	0.351 J	pCi/L	No
Total Radium	1.48 J	0.564 J	pCi/L	No
Chemical Oxygen Demand	45 J	9 J	mg/L	No, (Sensitivity failed)
Arsenic	0.0042 J	0.0017 J	mg/L	No, (Sensitivity failed)
Barium	0.063 J	0.051 J	mg/L	No, (RPD 21%)
Calcium	39.8	37.4	mg/L	Yes
Iron	6.1 J	3.73 J	mg/L	No, (RPD 48%)
Magnesium	20.6	18.5	mg/L	Yes
Nickel	0.001 J	0.003	mg/L	Yes
Potassium	0.53	0.55	mg/L	Yes
Sodium	27.3	25.8	mg/L	Yes

Table 2
Field Duplicate Comparison - Detections Only
BREC Wilson - September 2024 Sampling Event
Ohio County, Kentucky

Sample ID: Lab ID: Date:	MW3 10/1/2024 4101343-05	Well Duplicate 2 10/1/2024 4101343-41	Units	Meets QC
Bicarbonate Alkalinity as CaCO ₃	322	328	mg/L	Yes
Total Alkalinity	322	328	mg/L	Yes
Hardness Calculation as CaCO ₃	970	1000	mg/L	Yes
Specific Conductance (Lab)	1760	1750	uS/cm	Yes
Total Dissolved Solids	1420	1420	mg/L	Yes
Total Organic Carbon	0.9 J	0.8 J-	mg	Yes
Chloride	50.9 J	57.4 J	mg/L	Yes
Fluoride	0.26	0.23	mg/L	Yes
Sulfate	580	673	mg/L	Yes
Radium-226	-0.066 J	-0.745 J	pCi/L	No
Radium-228	0.438 J	0.018 J	pCi/L	No
Total Radium	0.438 J	0.018 J	pCi/L	No
Chemical Oxygen Demand	9 J	13 U	mg/L	Yes
Potassium	5.43	5.77	mg/L	Yes
Arsenic	0.0026 J	0.0009 J	mg/L	No, (Sensitivity failed)
Barium	0.018	0.016	mg/L	Yes
Boron	0.84	0.86	mg/L	Yes
Calcium	258	269	mg/L	Yes
Cobalt	0.008	0.005	mg/L	Yes
Iron	9.63 J	3.5 J	mg/L	No, (RPD 93%)
Lithium	0.03	0.03	mg/L	Yes
Magnesium	79.4	80	mg/L	Yes
Molybdenum	0.004 J	0.003 J	mg/L	Yes
Nickel	0.005	0.005	mg/L	Yes
Sodium	39.9	40	mg/L	Yes

Notes

ID = Identification
J = Estimated value / Qualified as estimated
J- = Qualified as estimated biased low
mg/L = Milligrams per liter
MW = Monitoring Well
pCi/L = PicoCurie per liter
QC = Quality Control
RPD = Relative Percent Difference
U = Compound was not detected
uS/cm = Microsiemens per centimeter

APPENDIX E – STATISTICAL EVALUATION



July 11, 2024

Mr. Mark Bertram
Big Rivers Electric Corporation
Administrative Services
Director Environmental Services
710 West 2nd Street
Owensboro, KY 42301

Re: Statistical Evaluation of April 2024 Assessment Monitoring Groundwater Data
D.B. Wilson Station Phase II CCR Landfill in Centertown, Kentucky
Agency Interest ID #: 3319

Dear Mr. Bertram:

This letter presents the results of the statistical evaluation of analytical data from the April 2024 assessment monitoring event performed at the D.B. Wilson Station Phase II CCR Landfill in Centertown, Kentucky in accordance with the requirements of the U.S. Environmental Protection Agency's *Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments* (40 Code of Federal Regulations [CFR] Part 257, Subpart D). This letter also presents a comparison of the April 2024 sampling results to groundwater protection standards (GWPSs). The GWPSs for the groundwater monitoring network were reviewed and updated as part of the statistical evaluation completed for the April 2024 sampling event and are presented on **Table 1**. These GWPSs will continue to be reviewed and updated as additional data are collected. A comparison of the April 2024 data to the updated GWPSs is presented on **Table 2**. The statistical evaluation presented herein was performed in accordance with the *Update to Certification of Statistical Method for Evaluating Groundwater in accordance with 40 CFR § 257.93 at D.B Wilson Station Phase II CC Landfill in Centertown, Kentucky* dated May 25, 2022.

In April 2024, the Phase II CCR Landfill Groundwater Monitoring Well Network was sampled for Appendix III and Appendix IV parameters per the requirements of 40 CFR §257.95(d)(1). Interwell prediction limit statistical analyses were performed for these well/constituent pairs and are discussed subsequently. GWPSs were also developed in accordance with 40 CFR §257.95(h) which describes a GWPS as the higher value between a statistically calculated background concentration for an analyte or the established maximum concentration limit (MCL) or the GWPS criteria for select Appendix IV parameters without an MCL presented in 40 CFR §257.95(h)(2). This letter presents the results of the statistical evaluation of the April 2024 assessment monitoring event for inclusion in the Phase II CCR Landfill Operating Record.

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Statistical Evaluation of Phase II CCR Landfill Compliance Monitoring Well Network Evaluation

A review of the interwell prediction limit evaluation was performed to compare the April 2024 concentrations of Appendix III and Appendix IV parameters observed at CCR downgradient compliance monitoring wells MW-5, MW-6, MW-7, and MW-10 to calculated prediction limits (i.e., background limits) that were established using data collected from April of 2016 through April of 2024 from upgradient monitoring well MW-8. Note, any data qualified as rejected or considered an outlier (statistically or flagged using professional judgement) during the data review were excluded from the statistical analysis. Certain parameters were detected in April 2024 at concentrations above the calculated background limits (equivalent to the MW-8 prediction limits), and a summary is included in **Attachment 1**. This included the following well/constituent pairs for downgradient compliance monitoring wells with statistically significant increases (SSIs) above calculated background limits:

Appendix III Parameters:

- Boron (MW-5, MW-6, MW-7, and MW-10)
- Calcium (MW-5, MW-6, MW-7, and MW-10)
- Chloride (MW-5, MW-6, MW-7, and MW-10)
- Sulfate (MW-5, MW-6, and MW-7)
- Total Dissolved Solids (TDS) (MW-5, MW-6, and MW-10)

Appendix IV Parameters:

- Cobalt (MW-10)
- Lithium (MW-5, MW-6 and MW-7)

Results of exceedances of background were generally consistent with the October 2023 statistical results. The reported April 2024 SSIs for calcium (MW-7), and sulfate (MW-5 and MW-7) were not present in October 2023. Additionally, sulfate (MW-10) and TDS (MW-7) SSIs were present in October 2023, but were not present in this event. All other above-noted Appendix III and Appendix IV SSIs continue to occur to at downgradient compliance monitoring wells in the April 2024 statistical analysis.

The Appendix IV constituents with SSIs (cobalt and lithium) were further evaluated to determine whether they are present at statistically significant levels (SSLs) over the GWPS by calculating the lower confidence limit (LCL) at 95% confidence for each well and constituent using the Baseline, Detection, and Assessment monitoring results collected to date from each monitoring

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well. For a constituent to be present at an SSL over the GWPS, its LCL must be greater than the GWPS. The comparison of the calculated LCLs with the GWPSs for cobalt and lithium at downgradient compliance monitoring wells MW-5, MW-6, MW-7, and MW-10 resulted in the following well/constituent pairs with SSLs above the GWPS:

- Cobalt (MW-10)

The LCLs for the remaining well/constituent pairs for cobalt and lithium were either equal to or less than the GWPS and thus are not considered SSLs. **Attachment 1** provides a summary of the calculated LCLs in comparison with the GWPSs. Results of SSLs above the GWPSs were generally consistent with 2023 result as cobalt (MW-10) was reported as SSLs in both the April and October 2023 events. Lithium (MW-6) was reported as an SSL in both 2023 events; however, it was not present as an SSL in this event (LCL was equal to the GWPS).

Given that certain Appendix III and IV constituents were observed within the Phase II CCR Landfill groundwater monitoring network at concentrations above their respective calculated background limit and/or the LCL for certain Appendix IV constituents was greater than the corresponding GWPSs, these results do not warrant a transition to detection monitoring per the requirements of 40 CFR §257.95(f) and assessment monitoring will continue for the next second half semiannual monitoring event in 2024.

Sincerely,

Burns & McDonnell Engineering Company, Inc.

A handwritten signature in blue ink that reads "Chris Hoglund".

Chris Hoglund, PG
Project Manager

Attachments:

Table 1 – Calculated Background and Groundwater Protection Standards for Groundwater
Table 2 – Summary of April 2024 Analytical Results



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Attachment 1 – Sanitas™ Statistical Outputs for Phase II CCR Landfill Compliance Monitoring Network

cc: Diana Merritt, BREC Wilson Station

TABLES

Table 1
Calculated Background and Groundwater Protection Standards for Groundwater
D.B. Wilson Station Phase II CCR Landfill in Centertown, Kentucky

Detection Monitoring Constituents (Appendix III)	Units	Background*	MCL	40 CFR §257.95(h)(2) Criteria	Groundwater Protection Standard
Boron	mg/L	0.0518	--	--	--
Calcium	mg/L	349	--	--	--
pH	SU	4.67 - 6.84	--	--	--
Total Dissolved Solids	mg/L	1849	--	--	--
Chloride	mg/L	5.584	--	--	--
Fluoride	mg/L	1.21	4	--	4
Sulfate	mg/L	2180	--	--	--
Assessment Monitoring Constituents (Appendix IV)	Units	Background*	MCL	40 CFR §257.95(h)(2) Criteria	Groundwater Protection Standard
Antimony	mg/L	0.0025	0.006	--	0.006
Arsenic	mg/L	0.0144	0.01	--	0.0144
Barium	mg/L	0.07	2	--	2
Beryllium	mg/L	0.002	0.004	--	0.004
Cadmium	mg/L	0.0005	0.005	--	0.005
Chromium	mg/L	0.0224	0.1	--	0.1
Cobalt	mg/L	0.009	--	0.006	0.009
Fluoride	mg/L	1.21	4	--	4
Lead	mg/L	0.012	--	0.015	0.015
Lithium	mg/L	0.02	--	0.04	0.04
Mercury	mg/L	0.000005	0.002	--	0.002
Molybdenum	mg/L	0.0187	--	0.1	0.1
Combined Radium 226 and 228**	pCi/L	2.94	5	--	5
Selenium	mg/L	0.0015	0.05	--	0.05
Thallium	mg/L	0.001	0.002	--	0.002

Notes:

*Background concentrations were determined utilizing interwell prediction limits (Attachment 1). Upgradient Monitoring Well MW-8 was used to calculate background concentrations. This included background data ranging from April 2016 through April 2024. For pH, background is between those values presented.

**Combined radium is reported with an uncertainty range. However, this range cannot be incorporated into statistical calculations as it varies per result and is not a standard value. Therefore, to maintain consistency in reporting these results, the reported laboratory concentration was used for the statistical analyses.

CFR - Code of Federal Regulations

MCL - Maximum Contaminant Level

mg/L - milligrams per Liter

pCi/L - picocuries per Liter

SU - standard units

Table 2
Summary of April 2024 Analytical Results
D.B. Wilson Station Phase II CCR Landfill in Centertown, Kentucky

Sample Location: Sample Date: Laboratory ID(s): All analytes excl. Radium/Radium only Note(s):			Calculated Background ¹	GWPS ²	MW-5 4/17/2024 4042964-11 Downgradient	MW-6 4/16/2024 4042964-13 Downgradient	MW-7 4/16/2024 4042964-15 Downgradient	MW-8 4/16/2024 4042964-17 Upgradient Well	MW-10 4/16/2024 4042964-19 Downgradient
Analytical Method	Analyte	Unit			CCR Compliance Monitoring Well Network				
Appendix III - Detection Monitoring									
6010B	Boron	mg/L	0.0518	--	0.86 M1, M2	1.37 D1	5.23 D1	0.10 U	0.35
6010B	Calcium	mg/L	349	--	642 D1, M3	525 D1	453 D1	218 D1	410 D1
In Situ	pH	SU	4.67 - 6.84	--	6.30	6.67	6.79	6.30	5.89
2540 C-2015	Total Dissolved Solids	mg/L	1849	--	3320 Y1	2520	1760 J H2	1270	2540
300.0 REV 2.1	Chloride	mg/L	5.584	--	764 J- D, M2	56.5	389 D	5.0	61.5
300.0 REV 2.1	Fluoride	mg/L	1.21	4	0.18 J- M2, Y5, U	0.23	0.25	0.29	0.18 U
300.0 REV 2.1	Sulfate	mg/L	2180	--	4520 D, M2	4420 D	3400 D	1800 D	2090 A-01,D
Appendix IV - Assessment Monitoring									
6020A	Antimony	mg/L	0.0025	0.006	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
6020A	Arsenic	mg/L	0.0144	0.0144	0.0030 J+ M1	0.0052	0.0036	0.0039	0.0013
6020A	Barium	mg/L	0.07	2	0.011	0.011	0.014	0.014	0.007
6020A	Beryllium	mg/L	0.002	0.004	0.002 UJ	0.002 U	0.001 U	0.001 U	0.001 U
6020A	Cadmium	mg/L	0.0005	0.005	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 J
6020A	Chromium	mg/L	0.0224	0.1	0.0006 U	0.0006 U	0.0006 U	0.0008 J	0.0006 U
6020A	Cobalt	mg/L	0.009	0.009	0.006	0.006	0.004 U	0.004 U	0.066
300.0 REV 2.1	Fluoride	mg/L	1.21	4	0.18 J- M2, Y5, U	0.23	0.25	0.29	0.18 U
6020A	Lead	mg/L	0.012	0.015	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
6020A	Lithium	mg/L	0.02	0.04	0.04 J- D2	0.05 D2	0.04 D2	0.01 D2, J	0.01 D2, J
245.7 REV 2	Mercury	mg/L	0.000005	0.002	0.000005 UJ	0.000005 U	0.000005 U	0.000005 U	0.0000034 J
6020A	Molybdenum	mg/L	0.0187	0.1	0.004 J	0.008 J	0.006 J	0.01	0.002 U
903.1/904.0	Combined Radium 226 and 228 ³	pCi/l	2.94	5	1.37 J	0.945 J	1.08 J	1.18 J	0.298 J
6020A	Selenium	mg/L	0.0015	0.05	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
6020A	Thallium	mg/L	0.001	0.002	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U

Notes
1 - Background concentrations were determined utilizing interwell prediction limits. Upgradient well MW-8 was used to determine these background concentrations. This included data ranging from April 2016 through April 2024. For pH, background is between those values
2 - GWPSs were developed in accordance with §257.95(h).
3 - Combined radium is reported with an associate range. However, this range cannot be incorporated into statistical calculations as it varies per result and is not a standard value. Therefore, to maintain consistency in reporting these results, the reported laboratory concentration was used for the statistical analyses.

Bold - Analyte detected above calculated background concentration.
Parameter was detected in compliance monitoring well located downgradient of the CCR Landfill at a statistically significant level above its GWPS (see Attachment 1 for statistical output).

A-01 - Data invalid due to closing QC requirements not met. CCV/CCB positions swapped.
CCR - coal combustion residuals
D - Results reported from dilution.
D1 - Sample required dilution due to high concentration of target analyte.
D2 - Sample required dilution due to matrix interference.
GWPS - Groundwater Protection Standard
H2 - Initial analysis within holding time. Reanalysis was past holding time.
J - estimated concentration
J- - estimated potential low bias
J+ - estimated potential high bias
MS/MSD - Matrix spike recovery/matrix spike recovery duplicate
M1 - Matrix spike recovery was high; the method control sample recovery was acceptable.
M2 - Matrix spike recovery was low; the method control sample recovery was acceptable.
M3 - The accuracy of the spike recovery value is reduced since the analyte concentration in the sample is disproportionate to spike level. The method control sample recovery was acceptable.
mg/L - milligram per liter
pCi/L - picocurie per liter
RPD - Relative percent difference
SU - standard unit
U - Nondetect
UJ - Estimated at the reporting limit
Y1 - Sample RPD exceeded the method control limit.
Y5 - MS/MSD RPD exceeded the method control limit.

ATTACHMENT 1 – SANITAS™ STATISTICAL OUTPUTS FOR PHASE II CCR
LANDFILL COMPLIANCE MONITORING NETWORK

Prediction Limit

Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile Printed 7/3/2024, 10:25 AM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Antimony (mg/L)	MW-5	0.0025	n/a	4/17/2024	0.0025ND	No	22	63.64	n/a	0.0409	NP Inter (NDs)
Antimony (mg/L)	MW-6	0.0025	n/a	4/16/2024	0.0025ND	No	22	63.64	n/a	0.0409	NP Inter (NDs)
Antimony (mg/L)	MW-7	0.0025	n/a	4/16/2024	0.0025ND	No	22	63.64	n/a	0.0409	NP Inter (NDs)
Antimony (mg/L)	MW-10	0.0025	n/a	4/16/2024	0.0025ND	No	22	63.64	n/a	0.0409	NP Inter (NDs)
Arsenic (ug/L)	MW-5	14.4	n/a	4/17/2024	3	No	22	0	n/a	0.0409	NP Inter (normality)
Arsenic (ug/L)	MW-6	14.4	n/a	4/16/2024	5.2	No	22	0	n/a	0.0409	NP Inter (normality)
Arsenic (ug/L)	MW-7	14.4	n/a	4/16/2024	3.6	No	22	0	n/a	0.0409	NP Inter (normality)
Arsenic (ug/L)	MW-10	14.4	n/a	4/16/2024	1.3	No	22	0	n/a	0.0409	NP Inter (normality)
Barium (ug/L)	MW-5	70	n/a	4/17/2024	11	No	21	0	n/a	0.04265	NP Inter (normality)
Barium (ug/L)	MW-6	70	n/a	4/16/2024	11	No	21	0	n/a	0.04265	NP Inter (normality)
Barium (ug/L)	MW-7	70	n/a	4/16/2024	14	No	21	0	n/a	0.04265	NP Inter (normality)
Barium (ug/L)	MW-10	70	n/a	4/16/2024	7	No	21	0	n/a	0.04265	NP Inter (normality)
Beryllium (ug/L)	MW-5	2	n/a	4/17/2024	1ND	No	21	100	n/a	0.04265	NP Inter (NDs)
Beryllium (ug/L)	MW-6	2	n/a	4/16/2024	1ND	No	21	100	n/a	0.04265	NP Inter (NDs)
Beryllium (ug/L)	MW-7	2	n/a	4/16/2024	1ND	No	21	100	n/a	0.04265	NP Inter (NDs)
Beryllium (ug/L)	MW-10	2	n/a	4/16/2024	1ND	No	21	100	n/a	0.04265	NP Inter (NDs)
Boron (ug/L)	MW-5	51.8	n/a	4/17/2024	860	Yes	23	52.17	n/a	0.03929	NP Inter (NDs)
Boron (ug/L)	MW-6	51.8	n/a	4/16/2024	1370	Yes	23	52.17	n/a	0.03929	NP Inter (NDs)
Boron (ug/L)	MW-7	51.8	n/a	4/16/2024	5230	Yes	23	52.17	n/a	0.03929	NP Inter (NDs)
Boron (ug/L)	MW-10	51.8	n/a	4/16/2024	350	Yes	23	52.17	n/a	0.03929	NP Inter (NDs)
Cadmium (ug/L)	MW-5	0.5	n/a	4/17/2024	0.5ND	No	21	90.48	n/a	0.04265	NP Inter (NDs)
Cadmium (ug/L)	MW-6	0.5	n/a	4/16/2024	0.5ND	No	21	90.48	n/a	0.04265	NP Inter (NDs)
Cadmium (ug/L)	MW-7	0.5	n/a	4/16/2024	0.5ND	No	21	90.48	n/a	0.04265	NP Inter (NDs)
Cadmium (ug/L)	MW-10	0.5	n/a	4/16/2024	0.1J	No	21	90.48	n/a	0.04265	NP Inter (NDs)
Calcium (ug/L)	MW-5	349000	n/a	4/17/2024	642000	Yes	23	0	n/a	0.03929	NP Inter (normality)
Calcium (ug/L)	MW-6	349000	n/a	4/16/2024	525000	Yes	23	0	n/a	0.03929	NP Inter (normality)
Calcium (ug/L)	MW-7	349000	n/a	4/16/2024	453000	Yes	23	0	n/a	0.03929	NP Inter (normality)
Calcium (ug/L)	MW-10	349000	n/a	4/16/2024	410000	Yes	23	0	n/a	0.03929	NP Inter (normality)
Chloride (mg/L)	MW-5	5.584	n/a	4/17/2024	764	Yes	23	0	No	0.01	Param Inter
Chloride (mg/L)	MW-6	5.584	n/a	4/16/2024	56.5	Yes	23	0	No	0.01	Param Inter
Chloride (mg/L)	MW-7	5.584	n/a	4/16/2024	389	Yes	23	0	No	0.01	Param Inter
Chloride (mg/L)	MW-10	5.584	n/a	4/16/2024	61.5	Yes	23	0	No	0.01	Param Inter
Chromium (ug/L)	MW-5	22.4	n/a	4/17/2024	0.3ND	No	22	31.82	n/a	0.0409	NP Inter (normality)
Chromium (ug/L)	MW-6	22.4	n/a	4/16/2024	0.3ND	No	22	31.82	n/a	0.0409	NP Inter (normality)
Chromium (ug/L)	MW-7	22.4	n/a	4/16/2024	0.3ND	No	22	31.82	n/a	0.0409	NP Inter (normality)
Chromium (ug/L)	MW-10	22.4	n/a	4/16/2024	0.3ND	No	22	31.82	n/a	0.0409	NP Inter (normality)
Cobalt (ug/L)	MW-5	9	n/a	4/17/2024	6	No	21	47.62	n/a	0.04265	NP Inter (normality)
Cobalt (ug/L)	MW-6	9	n/a	4/16/2024	6	No	21	47.62	n/a	0.04265	NP Inter (normality)
Cobalt (ug/L)	MW-7	9	n/a	4/16/2024	2ND	No	21	47.62	n/a	0.04265	NP Inter (normality)
Cobalt (ug/L)	MW-10	9	n/a	4/16/2024	66	Yes	21	47.62	n/a	0.04265	NP Inter (normality)
Fluoride (mg/L)	MW-5	1.21	n/a	4/17/2024	1ND	No	23	8.696	n/a	0.03929	NP Inter (normality)
Fluoride (mg/L)	MW-6	1.21	n/a	4/16/2024	0.23	No	23	8.696	n/a	0.03929	NP Inter (normality)
Fluoride (mg/L)	MW-7	1.21	n/a	4/16/2024	0.25	No	23	8.696	n/a	0.03929	NP Inter (normality)
Fluoride (mg/L)	MW-10	1.21	n/a	4/16/2024	1ND	No	23	8.696	n/a	0.03929	NP Inter (normality)
Lead (ug/L)	MW-5	12	n/a	4/17/2024	1ND	No	22	68.18	n/a	0.0409	NP Inter (NDs)
Lead (ug/L)	MW-6	12	n/a	4/16/2024	1ND	No	22	68.18	n/a	0.0409	NP Inter (NDs)
Lead (ug/L)	MW-7	12	n/a	4/16/2024	1ND	No	22	68.18	n/a	0.0409	NP Inter (NDs)
Lead (ug/L)	MW-10	12	n/a	4/16/2024	1ND	No	22	68.18	n/a	0.0409	NP Inter (NDs)
Lithium (ug/L)	MW-5	20	n/a	4/17/2024	40	Yes	22	18.18	n/a	0.0409	NP Inter (Cohens/xform)
Lithium (ug/L)	MW-6	20	n/a	4/16/2024	50	Yes	22	18.18	n/a	0.0409	NP Inter (Cohens/xform)

Prediction Limit

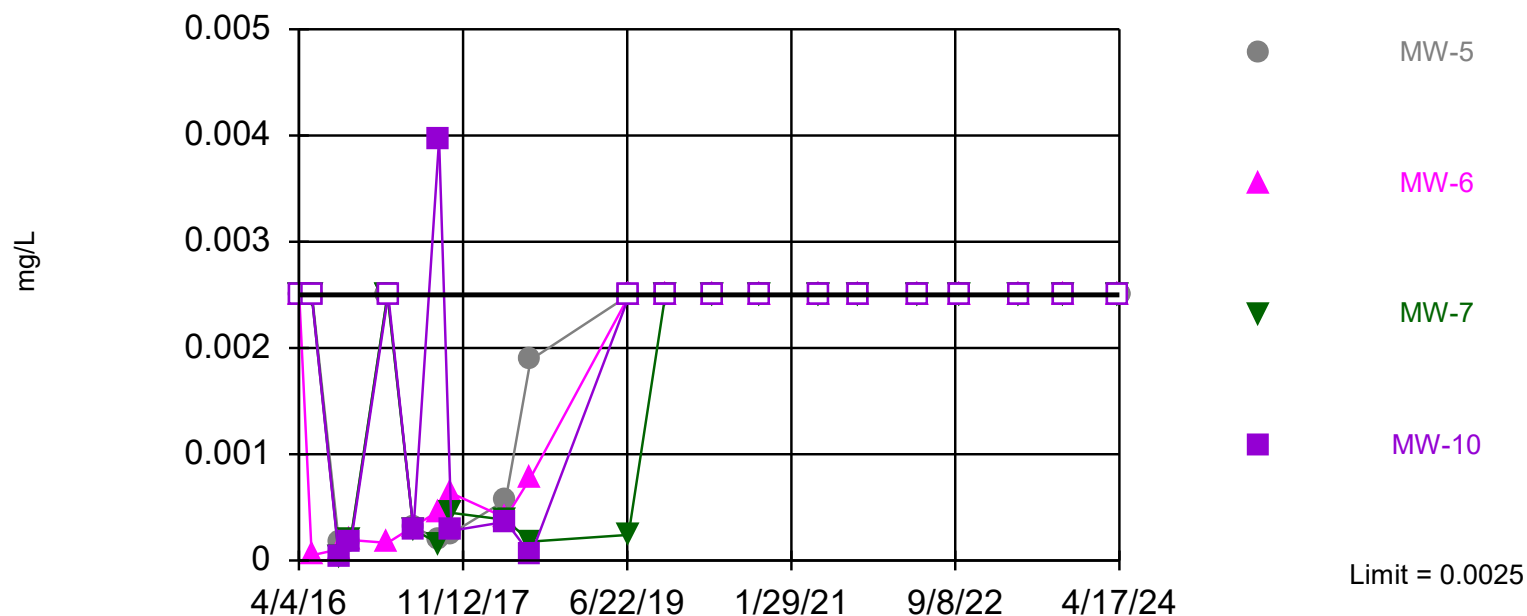
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile Printed 7/3/2024, 10:25 AM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Lithium (ug/L)	MW-7	20	n/a	4/16/2024	40	Yes	22	18.18	n/a	0.0409	NP Inter (Cohens/xform)
Lithium (ug/L)	MW-10	20	n/a	4/16/2024	10J	No	22	18.18	n/a	0.0409	NP Inter (Cohens/xform)
Mercury (ug/L)	MW-5	0.005	n/a	4/17/2024	0.0025ND	No	21	100	n/a	0.04265	NP Inter (NDs)
Mercury (ug/L)	MW-6	0.005	n/a	4/16/2024	0.0025ND	No	21	100	n/a	0.04265	NP Inter (NDs)
Mercury (ug/L)	MW-7	0.005	n/a	4/16/2024	0.0025ND	No	21	100	n/a	0.04265	NP Inter (NDs)
Mercury (ug/L)	MW-10	0.005	n/a	4/16/2024	0.0034J	No	21	100	n/a	0.04265	NP Inter (NDs)
Molybdenum (ug/L)	MW-5	18.7	n/a	4/17/2024	4J	No	22	0	n/a	0.0409	NP Inter (normality)
Molybdenum (ug/L)	MW-6	18.7	n/a	4/16/2024	8J	No	22	0	n/a	0.0409	NP Inter (normality)
Molybdenum (ug/L)	MW-7	18.7	n/a	4/16/2024	6J	No	22	0	n/a	0.0409	NP Inter (normality)
Molybdenum (ug/L)	MW-10	18.7	n/a	4/16/2024	5ND	No	22	0	n/a	0.0409	NP Inter (normality)
pH (SU)	MW-5	6.84	4.67	4/17/2024	6.3	No	22	0	n/a	0.08181	NP Inter (normality)
pH (SU)	MW-6	6.84	4.67	4/16/2024	6.67	No	22	0	n/a	0.08181	NP Inter (normality)
pH (SU)	MW-7	6.84	4.67	4/16/2024	6.79	No	22	0	n/a	0.08181	NP Inter (normality)
pH (SU)	MW-10	6.84	4.67	4/17/2024	5.89	No	22	0	n/a	0.08181	NP Inter (normality)
Radium 226 + 228 (pCi/L)	MW-5	2.94	n/a	4/17/2024	1.37	No	21	0	n/a	0.04265	NP Inter (normality)
Radium 226 + 228 (pCi/L)	MW-6	2.94	n/a	4/16/2024	0.945	No	21	0	n/a	0.04265	NP Inter (normality)
Radium 226 + 228 (pCi/L)	MW-7	2.94	n/a	4/16/2024	1.08	No	21	0	n/a	0.04265	NP Inter (normality)
Radium 226 + 228 (pCi/L)	MW-10	2.94	n/a	4/16/2024	0.298	No	21	0	n/a	0.04265	NP Inter (normality)
Selenium (ug/L)	MW-5	1.5	n/a	4/17/2024	1.5ND	No	21	90.48	n/a	0.04265	NP Inter (NDs)
Selenium (ug/L)	MW-6	1.5	n/a	4/16/2024	1.5ND	No	21	90.48	n/a	0.04265	NP Inter (NDs)
Selenium (ug/L)	MW-7	1.5	n/a	4/16/2024	1.5ND	No	21	90.48	n/a	0.04265	NP Inter (NDs)
Selenium (ug/L)	MW-10	1.5	n/a	4/16/2024	1.5ND	No	21	90.48	n/a	0.04265	NP Inter (NDs)
Sulfate (mg/L)	MW-5	2180	n/a	4/17/2024	4520	Yes	23	0	n/a	0.03929	NP Inter (normality)
Sulfate (mg/L)	MW-6	2180	n/a	4/16/2024	4420	Yes	23	0	n/a	0.03929	NP Inter (normality)
Sulfate (mg/L)	MW-7	2180	n/a	4/16/2024	3400	Yes	23	0	n/a	0.03929	NP Inter (normality)
Sulfate (mg/L)	MW-10	2180	n/a	4/16/2024	0.5ND	No	23	0	n/a	0.03929	NP Inter (normality)
Thallium (ug/L)	MW-5	1	n/a	4/17/2024	1ND	No	22	86.36	n/a	0.0409	NP Inter (NDs)
Thallium (ug/L)	MW-6	1	n/a	4/16/2024	1ND	No	22	86.36	n/a	0.0409	NP Inter (NDs)
Thallium (ug/L)	MW-7	1	n/a	4/16/2024	1ND	No	22	86.36	n/a	0.0409	NP Inter (NDs)
Thallium (ug/L)	MW-10	1	n/a	4/16/2024	1ND	No	22	86.36	n/a	0.0409	NP Inter (NDs)
Total Dissolved Solids (mg/L)	MW-5	1849	n/a	4/17/2024	3320	Yes	23	0	x^2	0.01	Param Inter
Total Dissolved Solids (mg/L)	MW-6	1849	n/a	4/16/2024	2520	Yes	23	0	x^2	0.01	Param Inter
Total Dissolved Solids (mg/L)	MW-7	1849	n/a	4/16/2024	1760	No	23	0	x^2	0.01	Param Inter
Total Dissolved Solids (mg/L)	MW-10	1849	n/a	4/16/2024	2540	Yes	23	0	x^2	0.01	Param Inter

Within Limit

Prediction Limit

Interwell Non-parametric



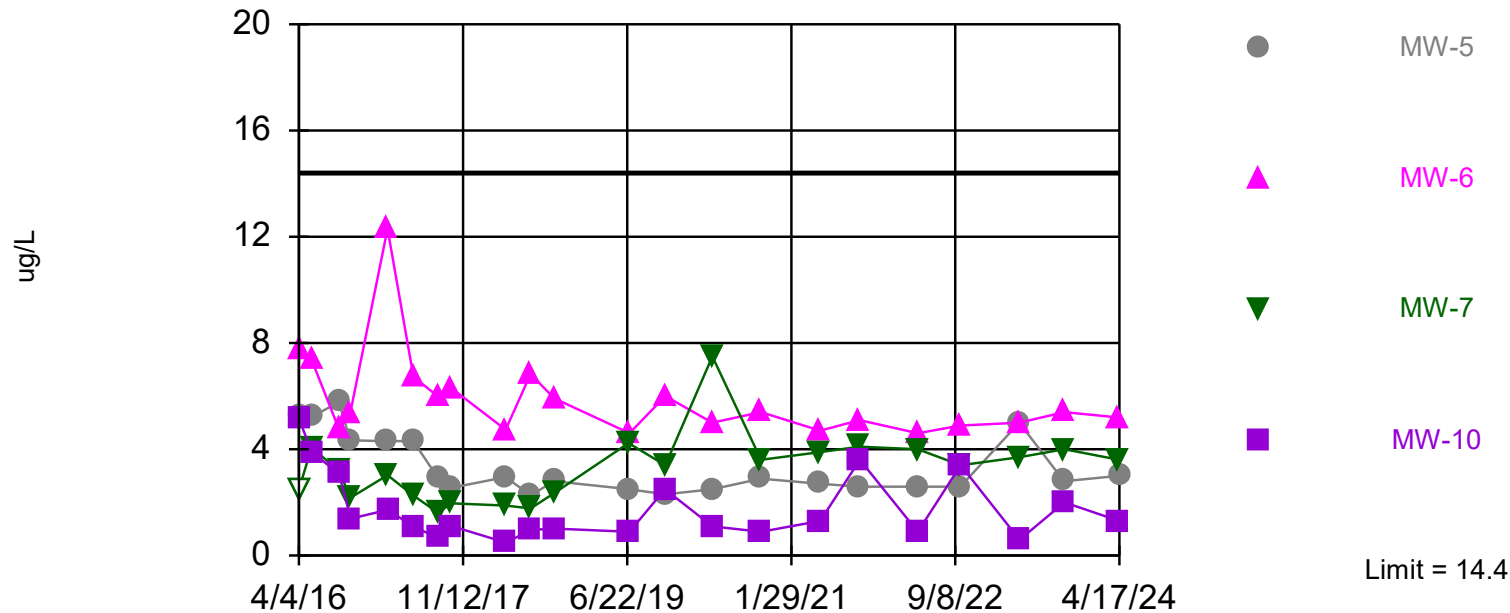
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 22 background values. 63.64% NDs. Report alpha = 0.1538. Individual comparison alpha = 0.0409. Most recent point for each compliance well compared to limit. Distribution was found to be non-normal after removal of suspect values, so outliers could not be identified. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Antimony Analysis Run 7/3/2024 10:24 AM View: BREC Wilson GW
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Within Limit

Prediction Limit

Interwell Non-parametric



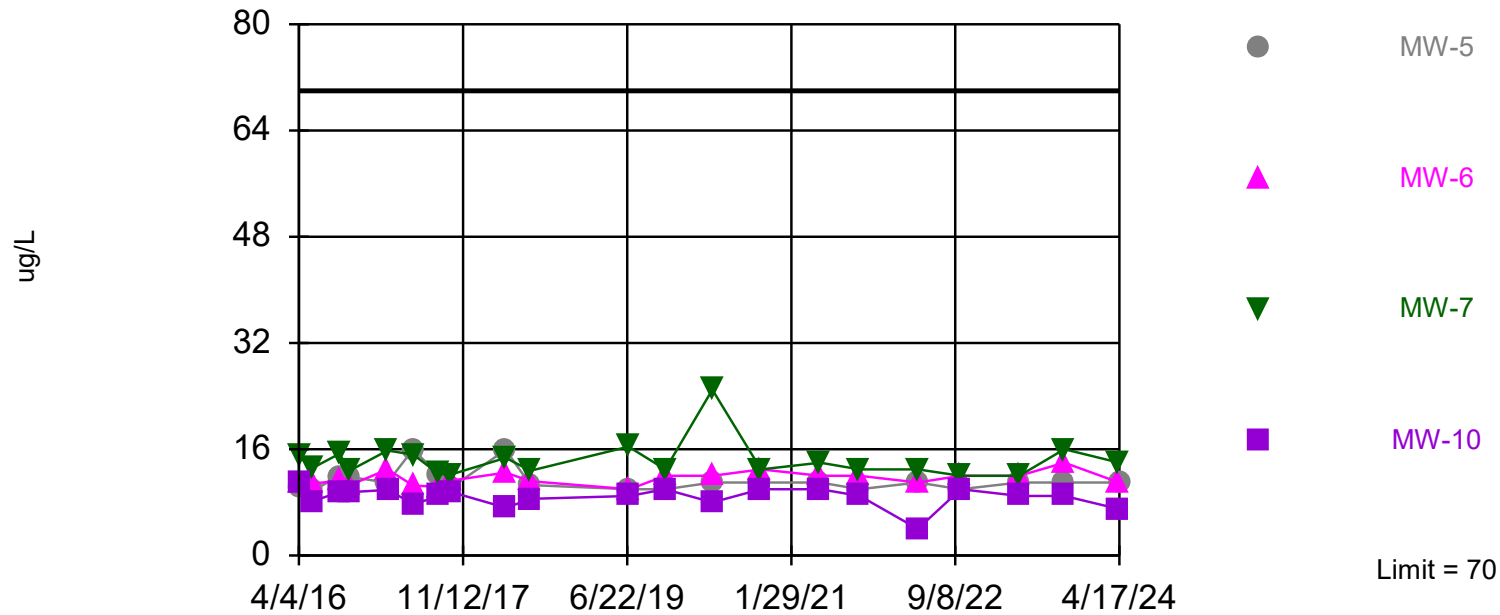
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 22 background values. Report alpha = 0.1538. Individual comparison alpha = 0.0409. Most recent point for each compliance well compared to limit. Distribution was found to be non-normal after removal of suspect values, so outliers could not be identified. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Arsenic Analysis Run 7/3/2024 10:24 AM View: BREC Wilson GW
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Within Limit

Prediction Limit

Interwell Non-parametric



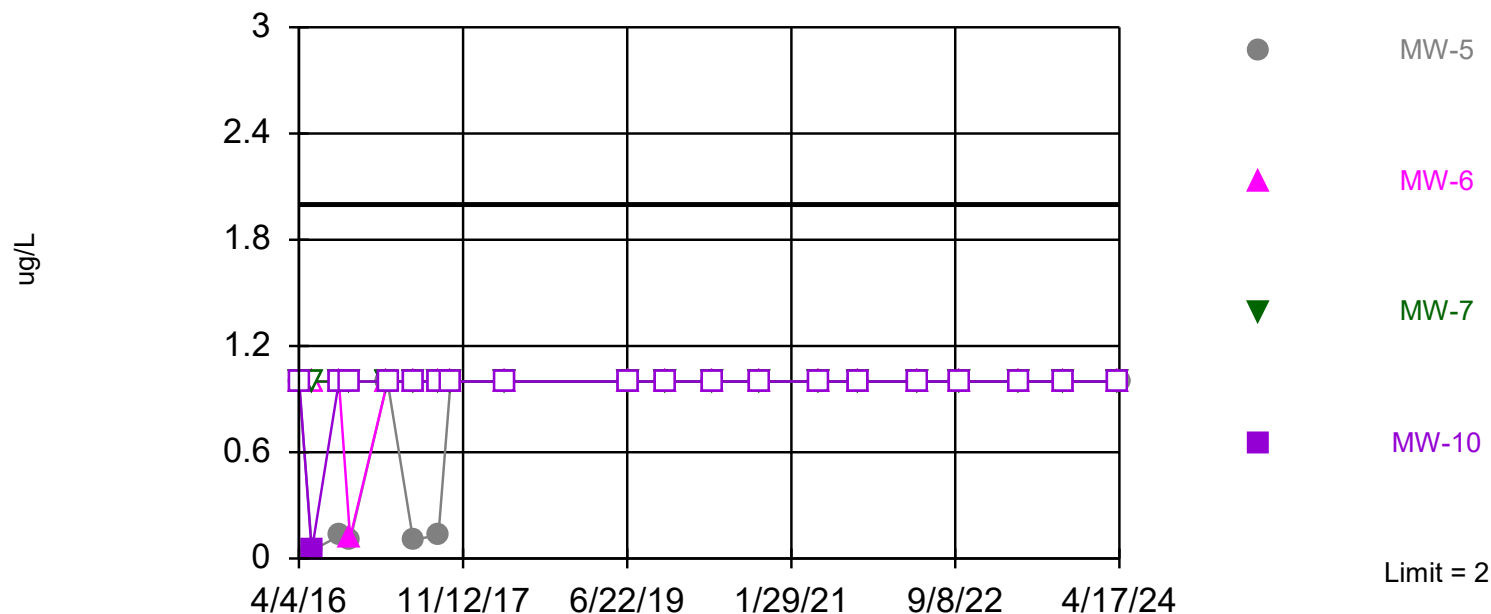
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 21 background values. Report alpha = 0.16. Individual comparison alpha = 0.04265. Most recent point for each compliance well compared to limit. After outlier removal distribution was non-normal, so outlier results were invalidated. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Barium Analysis Run 7/3/2024 10:25 AM View: BREC Wilson GW
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Within Limit

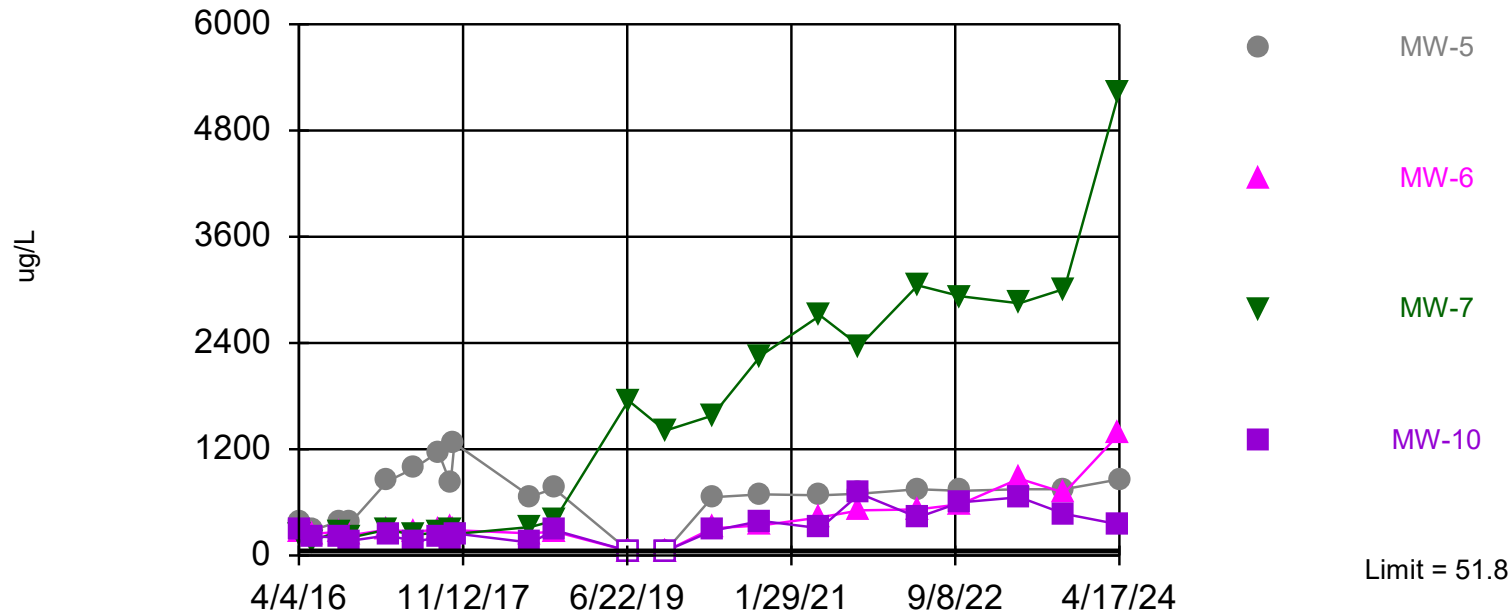
Prediction Limit

Interwell Non-parametric



Exceeds Limit: MW-5, MW-6, MW-7, MW-10

Prediction Limit Interwell Non-parametric



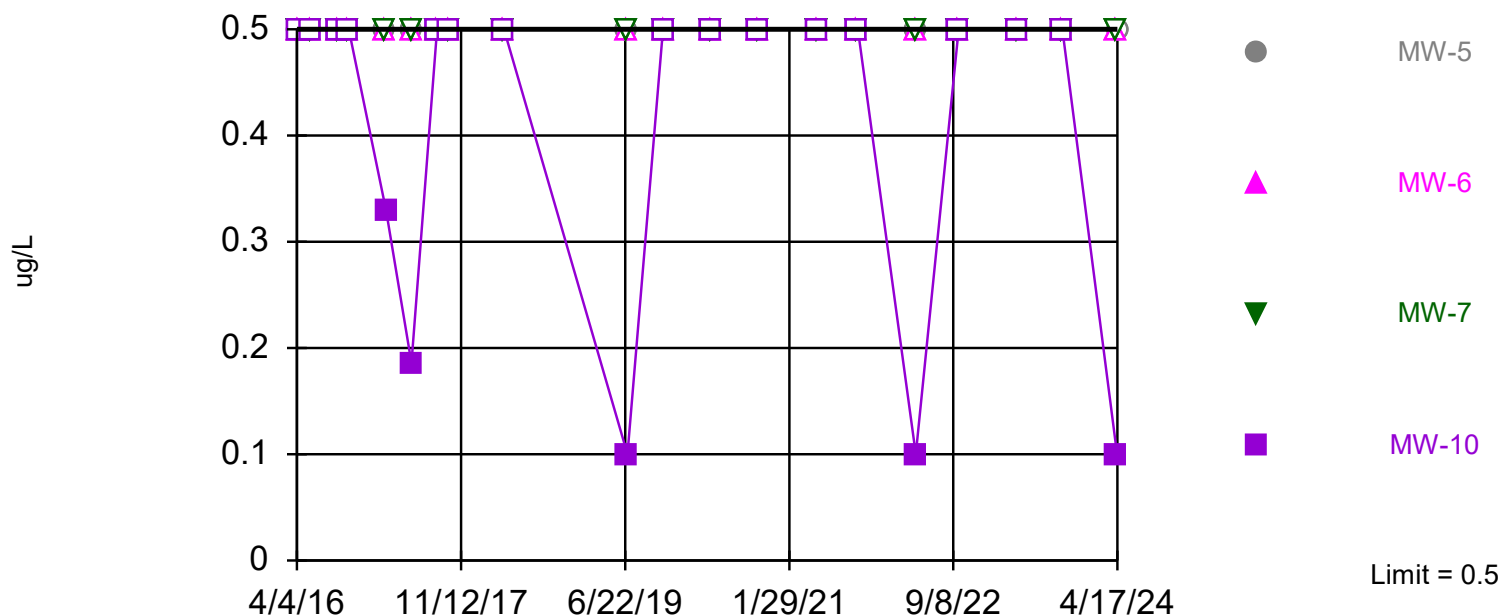
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 23 background values. 52.17% NDs. Report alpha = 0.1481. Individual comparison alpha = 0.03929. Most recent point for each compliance well compared to limit. Distribution was found to be non-normal after removal of suspect values, so outliers could not be identified. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Boron Analysis Run 7/3/2024 10:25 AM View: BREC Wilson GW
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Within Limit

Prediction Limit

Interwell Non-parametric

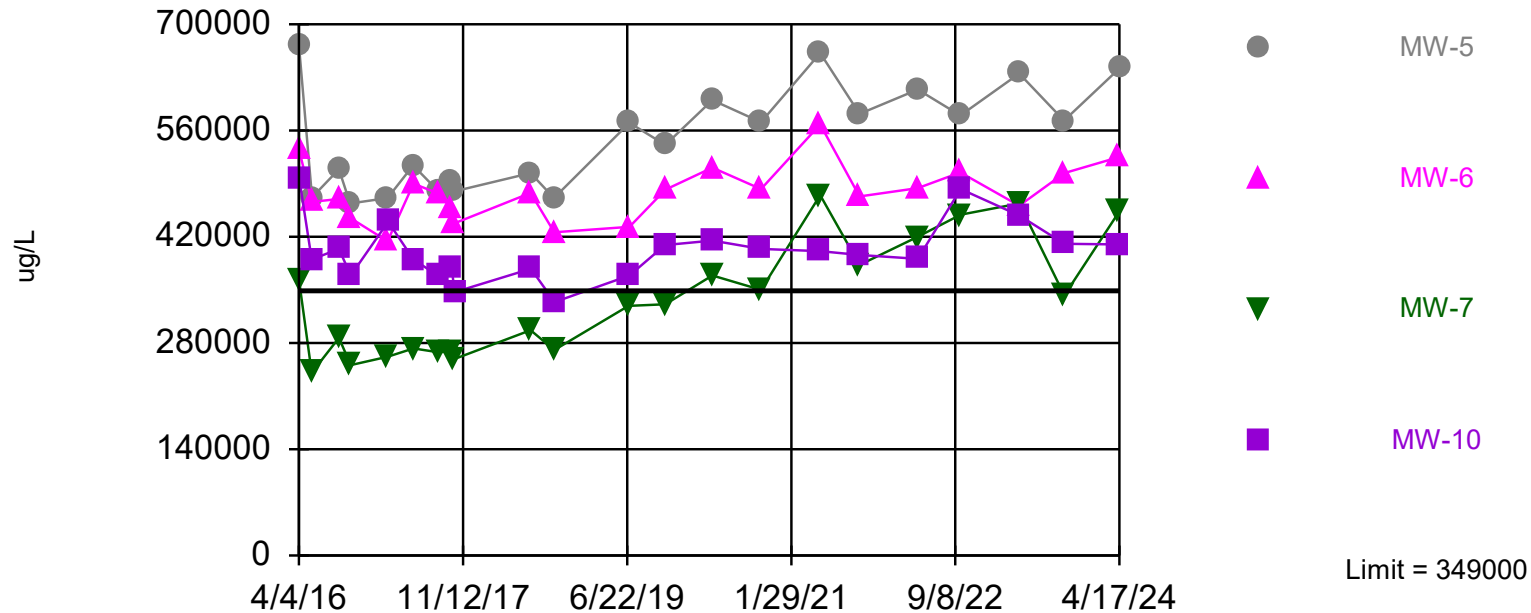


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 21 background values. 90.48% NDs. Report alpha = 0.16. Individual comparison alpha = 0.04265. Most recent point for each compliance well compared to limit. Distribution was found to be non-normal after removal of suspect values, so outliers could not be identified. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Cadmium Analysis Run 7/3/2024 10:25 AM View: BREC Wilson GW
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Exceeds Limit: MW-5, MW-6, MW-7, MW-10

Prediction Limit Interwell Non-parametric



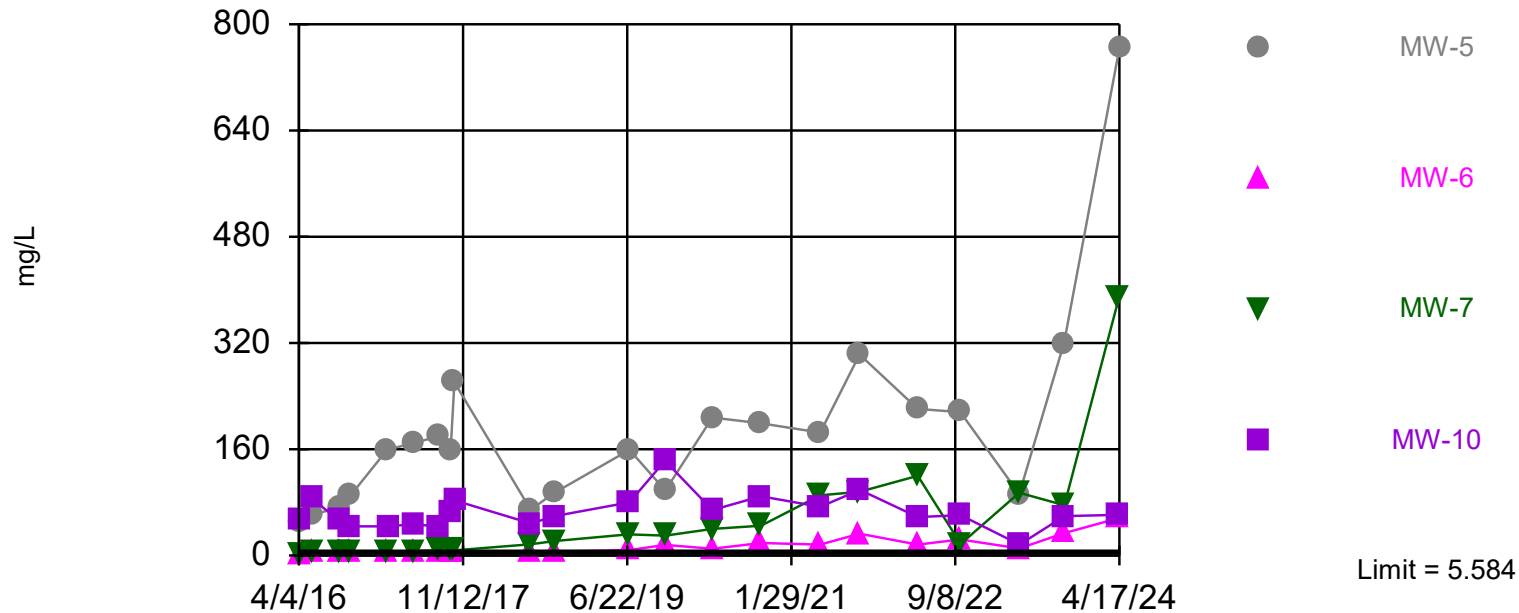
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 23 background values. Report alpha = 0.1481. Individual comparison alpha = 0.03929. Most recent point for each compliance well compared to limit. Distribution was found to be non-normal after removal of suspect values, so outliers could not be identified. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Calcium Analysis Run 7/3/2024 10:25 AM View: BREC Wilson GW
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Exceeds Limit: MW-5, MW-6, MW-7, MW-10

Prediction Limit

Interwell Parametric



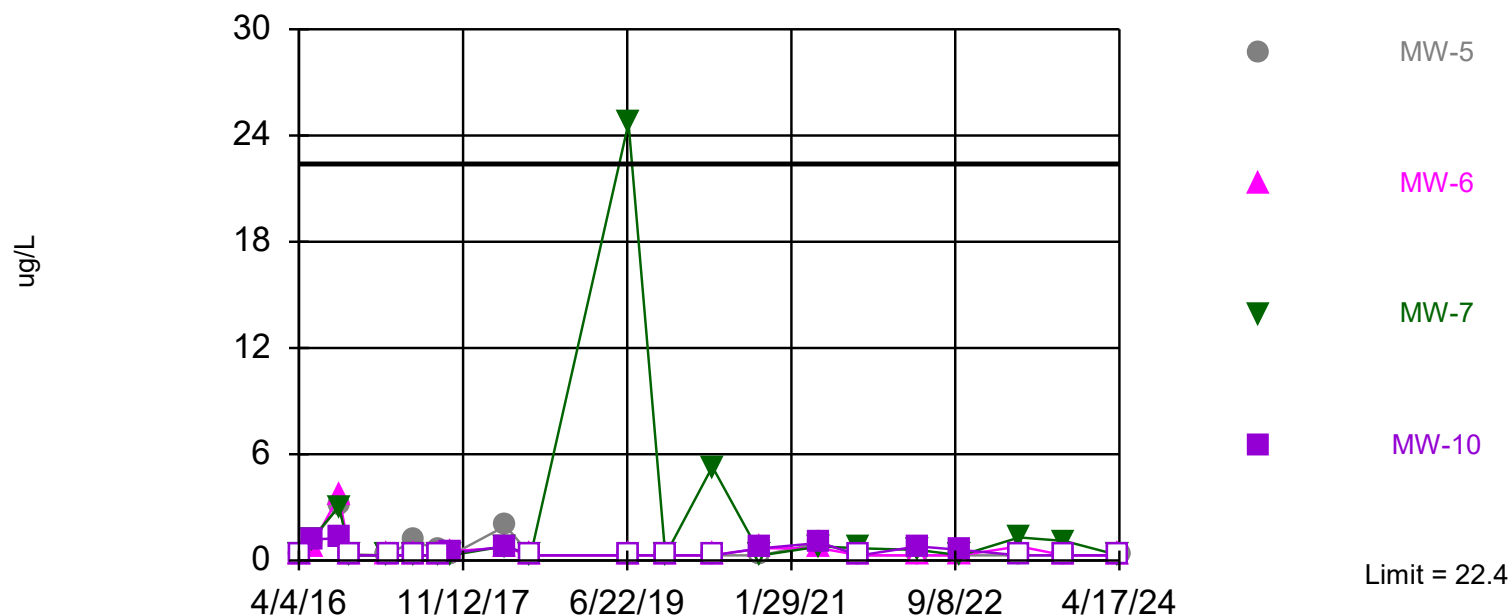
Background Data Summary: Mean=4.269, Std. Dev.=0.5135, n=23. Insufficient data to test for seasonality; not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9279, critical = 0.914. Report alpha = 0.0394. Individual comparison alpha = 0.01. Most recent point for each compliance well compared to limit. EPA 1989 outlier screening was performed on the background data. No background outliers were found.

Constituent: Chloride Analysis Run 7/3/2024 10:25 AM View: BREC Wilson GW
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Within Limit

Prediction Limit

Interwell Non-parametric



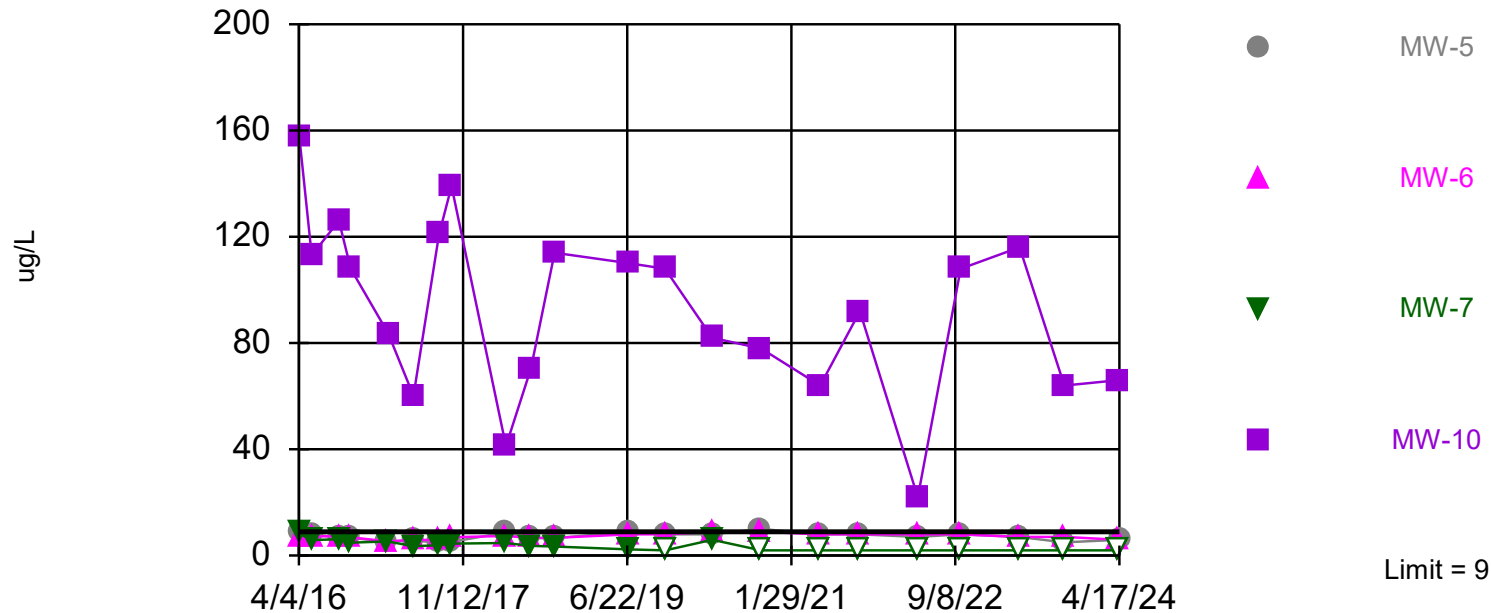
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 22 background values. 31.82% NDs. Report alpha = 0.1538. Individual comparison alpha = 0.0409. Most recent point for each compliance well compared to limit. After outlier removal distribution was non-normal, so outlier results were invalidated. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Chromium Analysis Run 7/3/2024 10:25 AM View: BREC Wilson GW
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Exceeds Limit: MW-10

Prediction Limit

Interwell Non-parametric



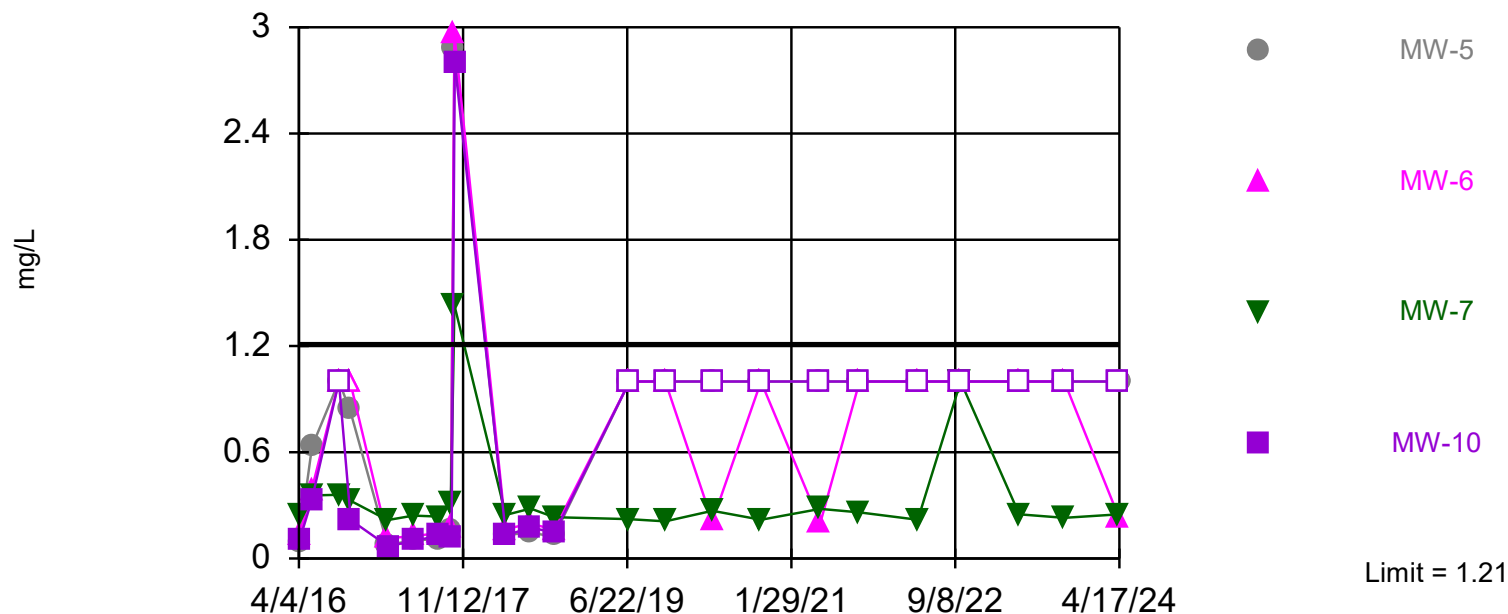
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 21 background values. 47.62% NDs. Report alpha = 0.16. Individual comparison alpha = 0.04265. Most recent point for each compliance well compared to limit. After outlier removal distribution was non-normal, so outlier results were invalidated. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Cobalt Analysis Run 7/3/2024 10:25 AM View: BREC Wilson GW
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Within Limit

Prediction Limit

Interwell Non-parametric



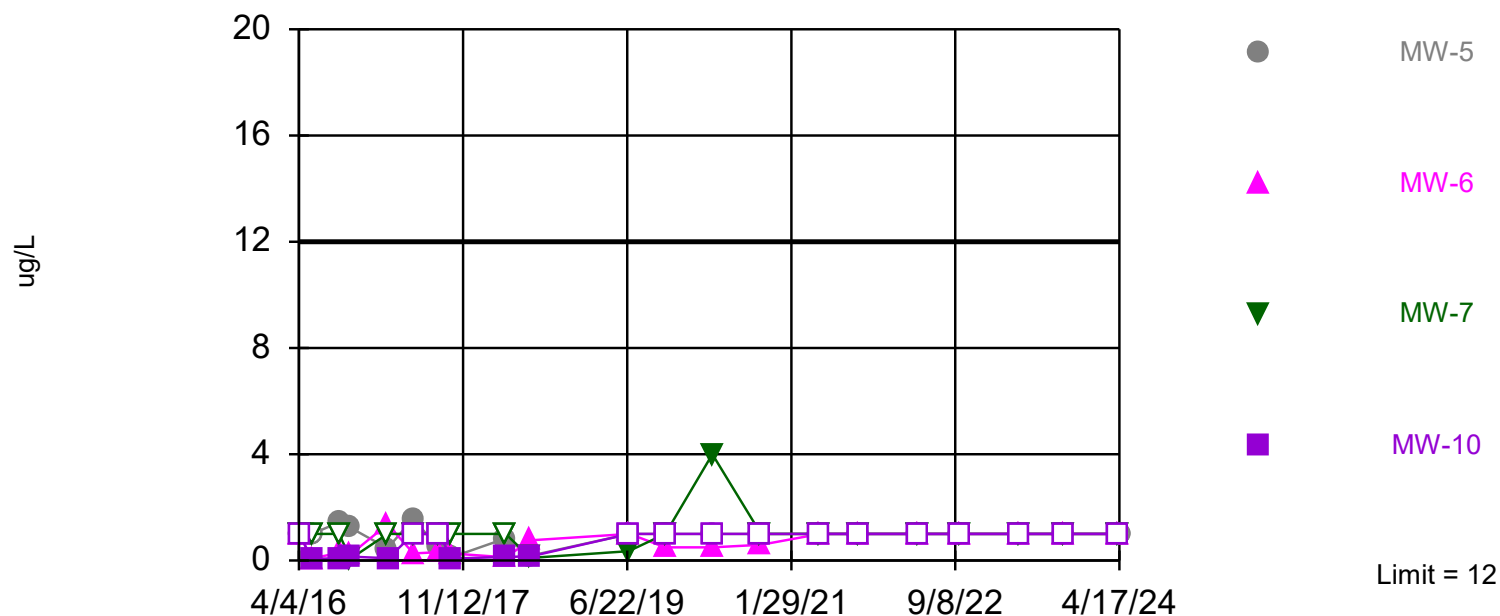
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 23 background values. 8.696% NDs. Report alpha = 0.1481. Individual comparison alpha = 0.03929. Most recent point for each compliance well compared to limit. Distribution was found to be non-normal after removal of suspect values, so outliers could not be identified. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Fluoride Analysis Run 7/3/2024 10:25 AM View: BREC Wilson GW
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Within Limit

Prediction Limit

Interwell Non-parametric



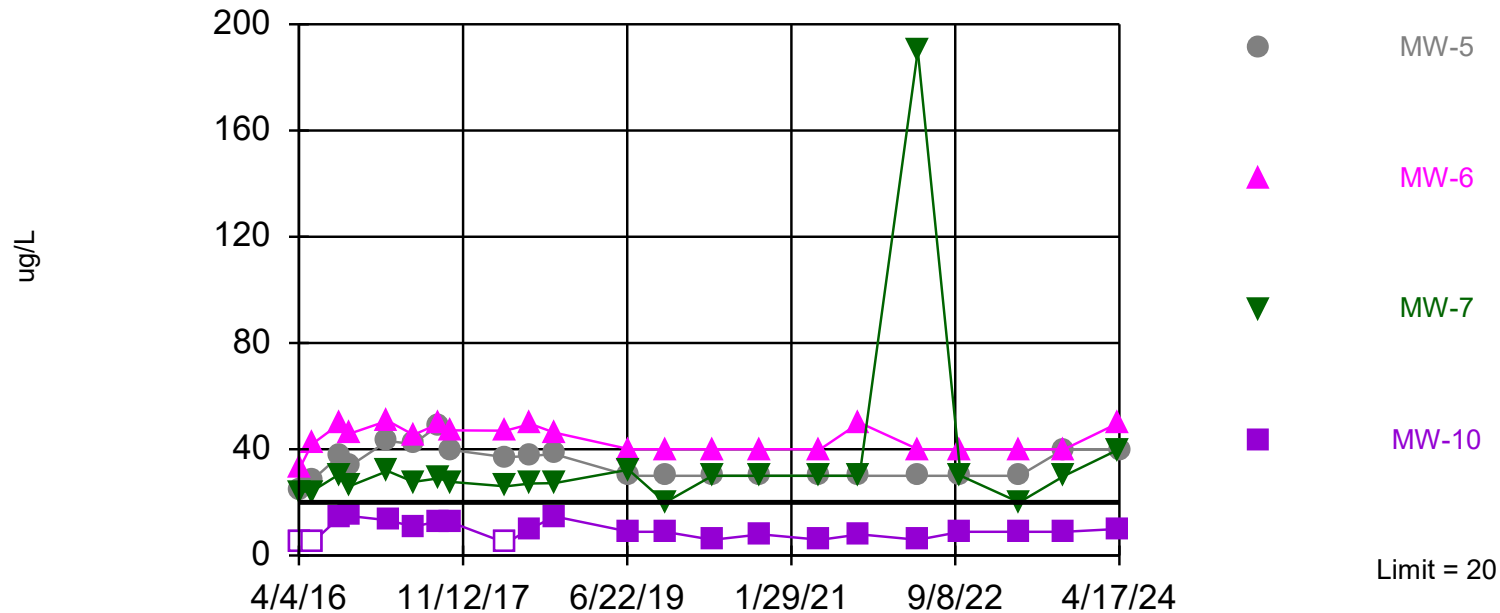
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 22 background values. 68.18% NDs. Report alpha = 0.1538. Individual comparison alpha = 0.0409. Most recent point for each compliance well compared to limit. After outlier removal distribution was non-normal, so outlier results were invalidated. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Lead Analysis Run 7/3/2024 10:25 AM View: BREC Wilson GW
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Exceeds Limit: MW-5, MW-6, MW-7

Prediction Limit

Interwell Non-parametric



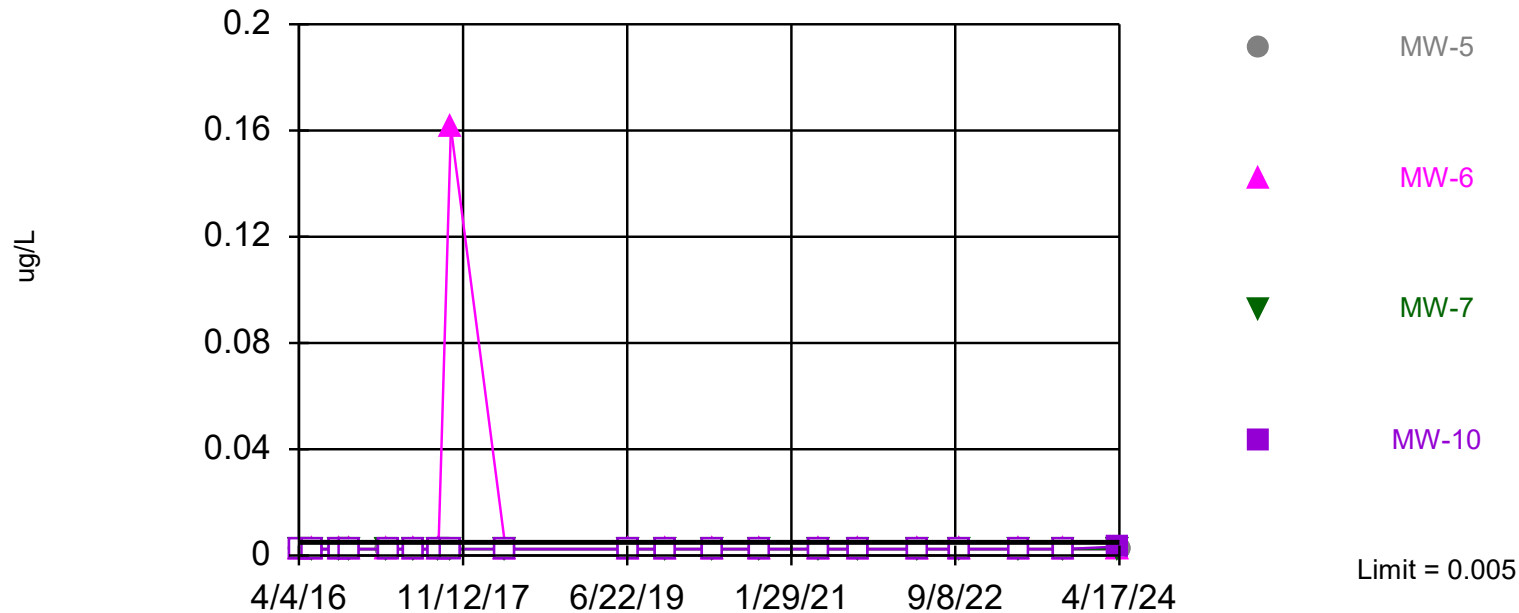
Non-parametric test used in lieu of parametric prediction limit because the data required both a power transformation and Cohen's adjustment. Limit is highest of 22 background values. 18.18% NDs. Report alpha = 0.1538. Individual comparison alpha = 0.0409. Most recent point for each compliance well compared to limit. EPA 1989 outlier screening was performed on the background data. No background outliers were found. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Lithium Analysis Run 7/3/2024 10:25 AM View: BREC Wilson GW
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Within Limit

Prediction Limit

Interwell Non-parametric



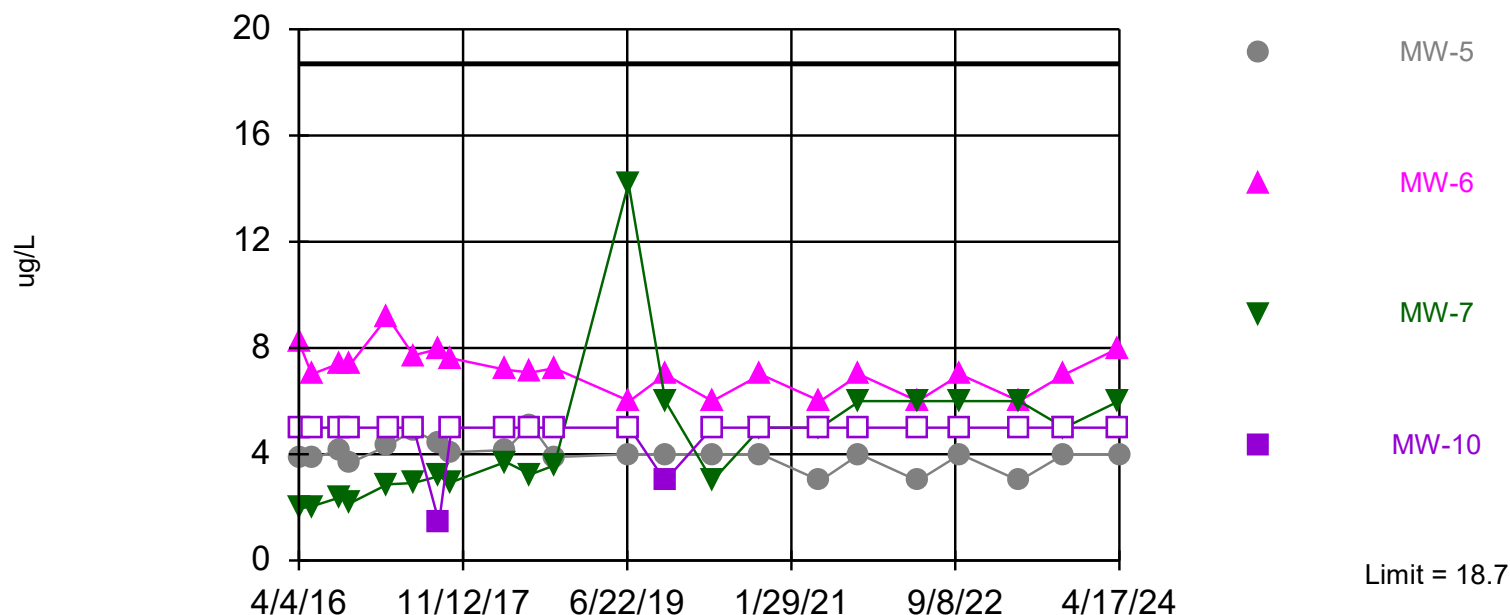
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 21$) were censored; limit is most recent reporting limit. Report alpha = 0.16. Individual comparison alpha = 0.04265. Most recent point for each compliance well compared to limit. Distribution was found to be non-normal after removal of suspect values, so outliers could not be identified. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Mercury Analysis Run 7/3/2024 10:25 AM View: BREC Wilson GW
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Within Limit

Prediction Limit

Interwell Non-parametric



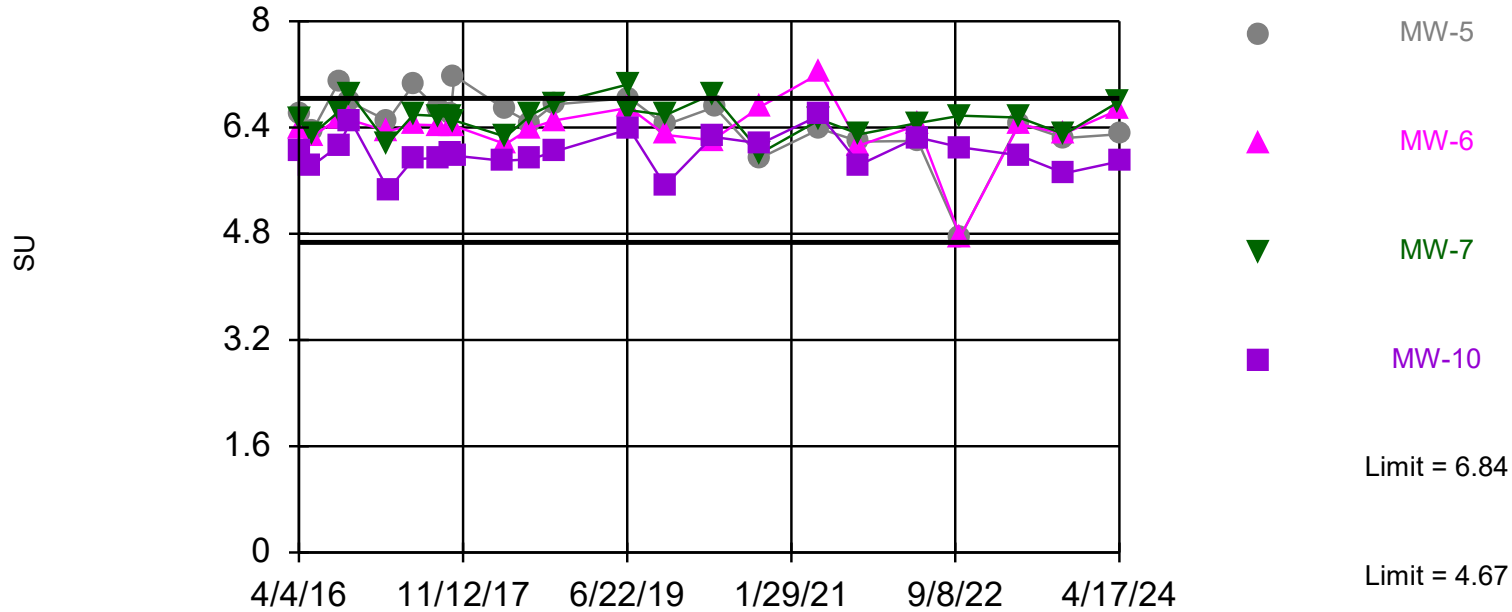
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 22 background values. Report alpha = 0.1538. Individual comparison alpha = 0.0409. Most recent point for each compliance well compared to limit. Distribution was found to be non-normal after removal of suspect values, so outliers could not be identified. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Molybdenum Analysis Run 7/3/2024 10:25 AM View: BREC Wilson GW
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Within Limits

Prediction Limit

Interwell Non-parametric



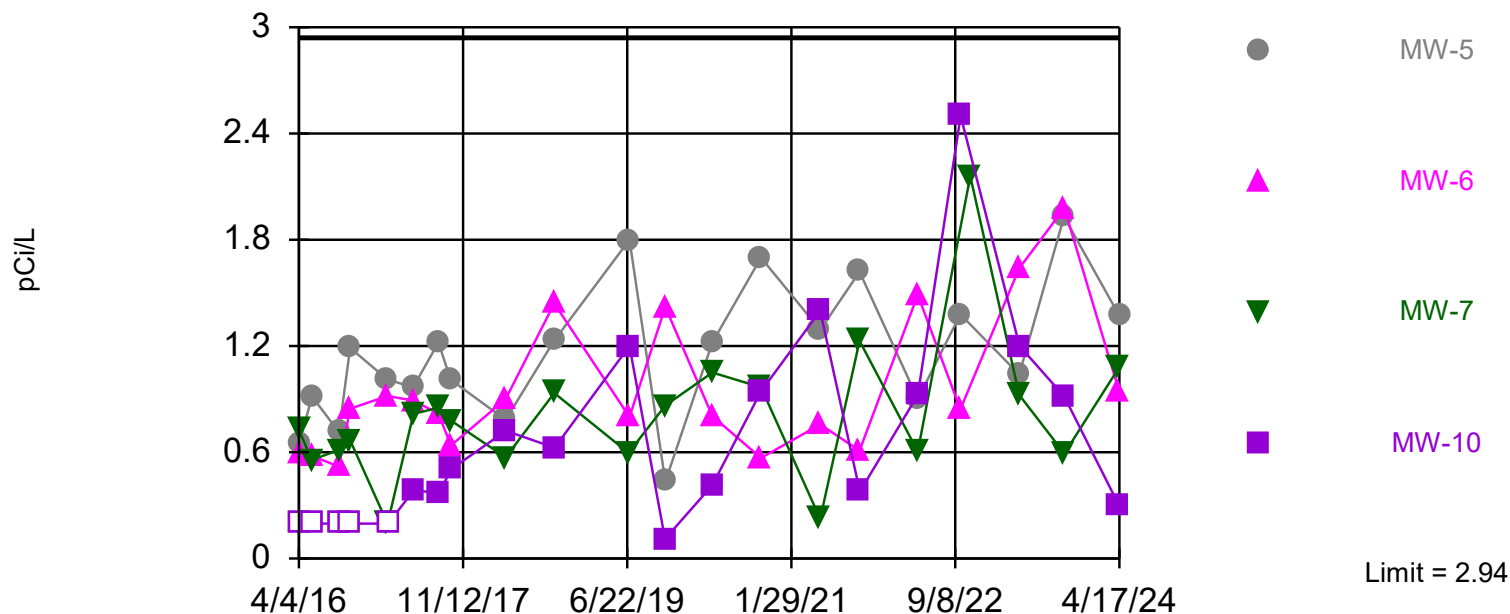
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limits are highest and lowest of 22 background values. Report alpha = 0.3077. Individual comparison alpha = 0.08181. Most recent point for each compliance well compared to limit. Distribution was found to be non-normal after removal of suspect values, so outliers could not be identified. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: pH Analysis Run 7/3/2024 10:25 AM View: BREC Wilson GW
 Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 21 background values. Report alpha = 0.16. Individual comparison alpha = 0.04265. Most recent point for each compliance well compared to limit. Distribution was found to be non-normal after removal of suspect values, so outliers could not be identified. Insufficient data to test for seasonality; data will not be deseasonalized.

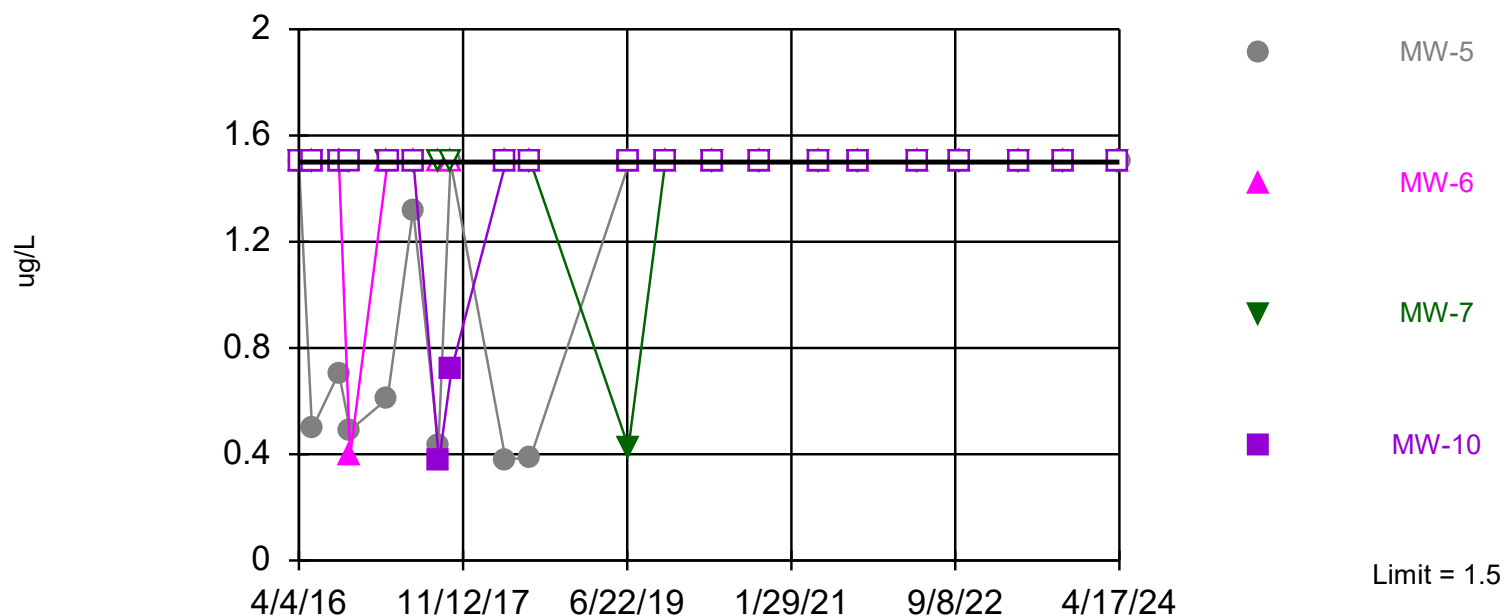
Constituent: Radium 226 + 228 Analysis Run 7/3/2024 10:25 AM View: BREC Wilson GW

Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Within Limit

Prediction Limit

Interwell Non-parametric



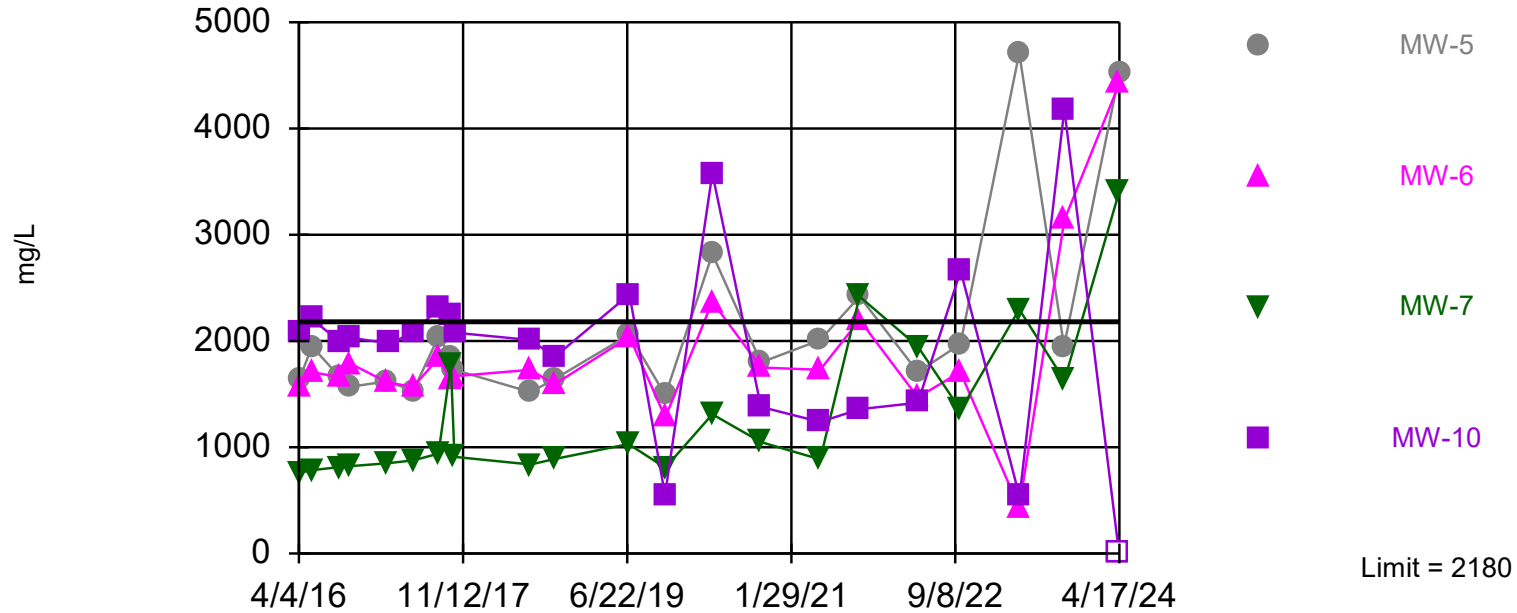
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 21 background values. 90.48% NDs. Report alpha = 0.16. Individual comparison alpha = 0.04265. Most recent point for each compliance well compared to limit. After outlier removal distribution was non-normal, so outlier results were invalidated. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Selenium Analysis Run 7/3/2024 10:25 AM View: BREC Wilson GW
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Exceeds Limit: MW-5, MW-6, MW-7

Prediction Limit

Interwell Non-parametric



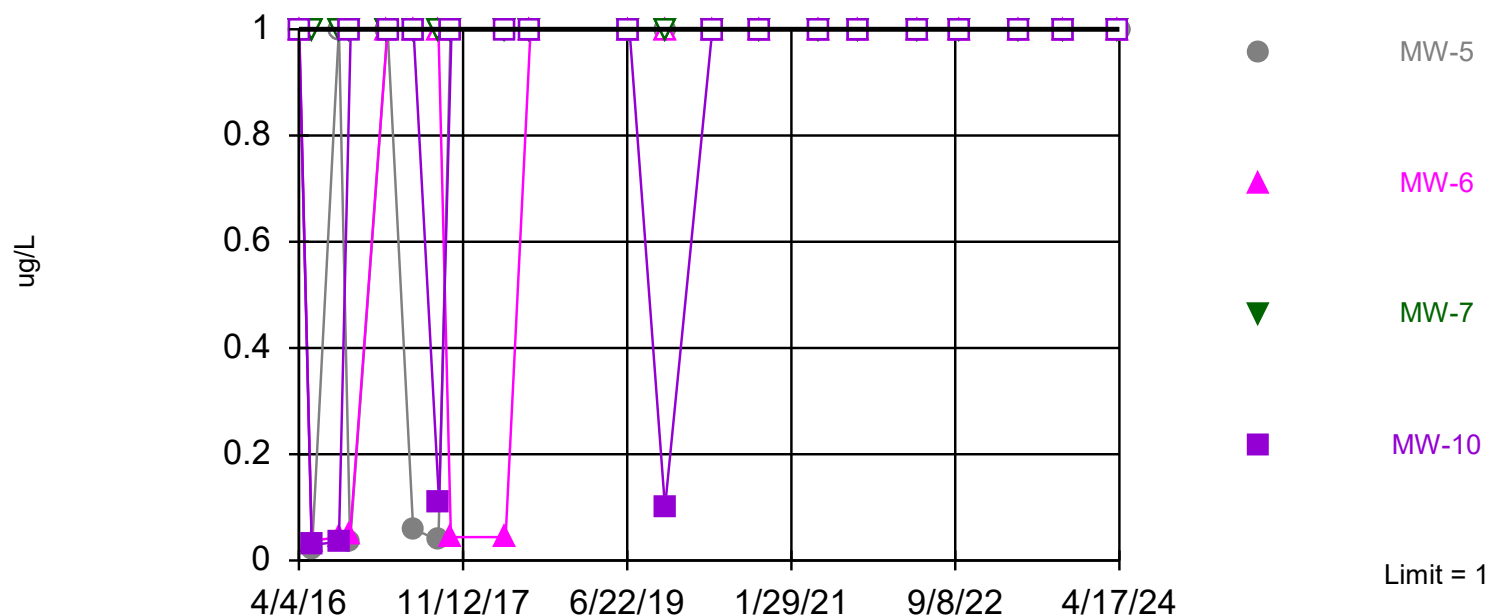
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 23 background values. Report alpha = 0.1481. Individual comparison alpha = 0.03929. Most recent point for each compliance well compared to limit. Distribution was found to be non-normal after removal of suspect values, so outliers could not be identified. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Sulfate Analysis Run 7/3/2024 10:25 AM View: BREC Wilson GW
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Within Limit

Prediction Limit

Interwell Non-parametric



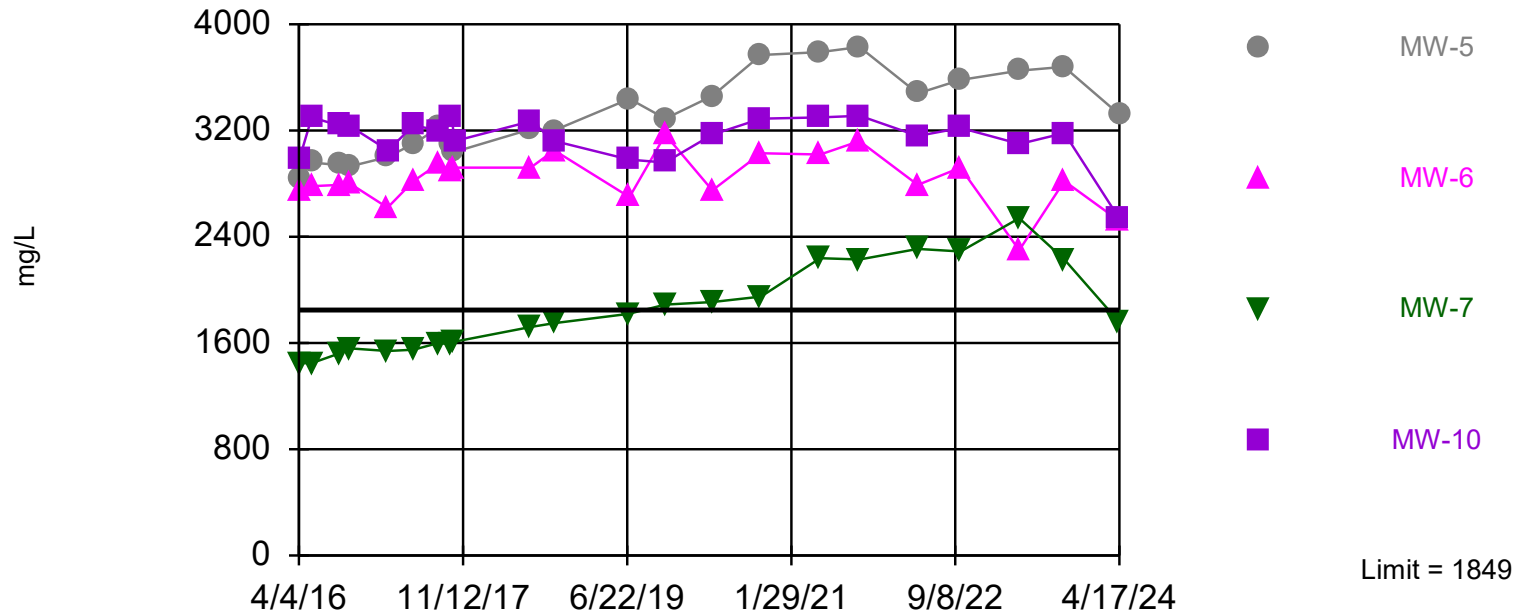
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 22 background values. 86.36% NDs. Report alpha = 0.1538. Individual comparison alpha = 0.0409. Most recent point for each compliance well compared to limit. After outlier removal distribution was non-normal, so outlier results were invalidated. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Thallium Analysis Run 7/3/2024 10:25 AM View: BREC Wilson GW
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Exceeds Limit: MW-5, MW-6, MW-10

Prediction Limit

Interwell Parametric



Background Data Summary (based on square transformation): Mean=2393935, Std. Dev.=400060, n=23. Insufficient data to test for seasonality; not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9168, critical = 0.914. Report alpha = 0.0394. Individual comparison alpha = 0.01. Most recent point for each compliance well compared to limit. Distribution was found to be non-normal after removal of suspect values, so outliers could not be identified.

Constituent: Total Dissolved Solids Analysis Run 7/3/2024 10:25 AM View: BREC Wilson GW

Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Confidence Interval

Big Rivers Electric Corp.

Client: Burns & McDonnell

Data: BREC Wilson_Datafile

Printed 7/3/2024, 10:29 AM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Cobalt (ug/L)	MW-5	7.697	6.622	9	No	22	0	No	0.05	Param.
Cobalt (ug/L)	MW-6	7.601	6.893	9	No	22	0	No	0.05	Param.
Cobalt (ug/L)	MW-7	4.68	2	9	No	22	40.91	No	0.05	NP (normality)
Cobalt (ug/L)	MW-8 (bg)	2	1.13	9	No	22	45.45	No	0.05	NP (normality)
Cobalt (ug/L)	MW-10	105	80.86	9	Yes	22	0	No	0.05	Param.
Lithium (ug/L)	MW-5	36.81	32.31	40	No	22	0	No	0.05	Param.
Lithium (ug/L)	MW-6	47.2	40	40	No	22	0	No	0.05	NP (normality)
Lithium (ug/L)	MW-7	30	27.1	40	No	22	0	No	0.05	NP (normality)
Lithium (ug/L)	MW-8 (bg)	12.17	9.372	40	No	22	18.18	No	0.05	Param.
Lithium (ug/L)	MW-10	10.6	8.203	40	No	22	13.64	No	0.05	Param.

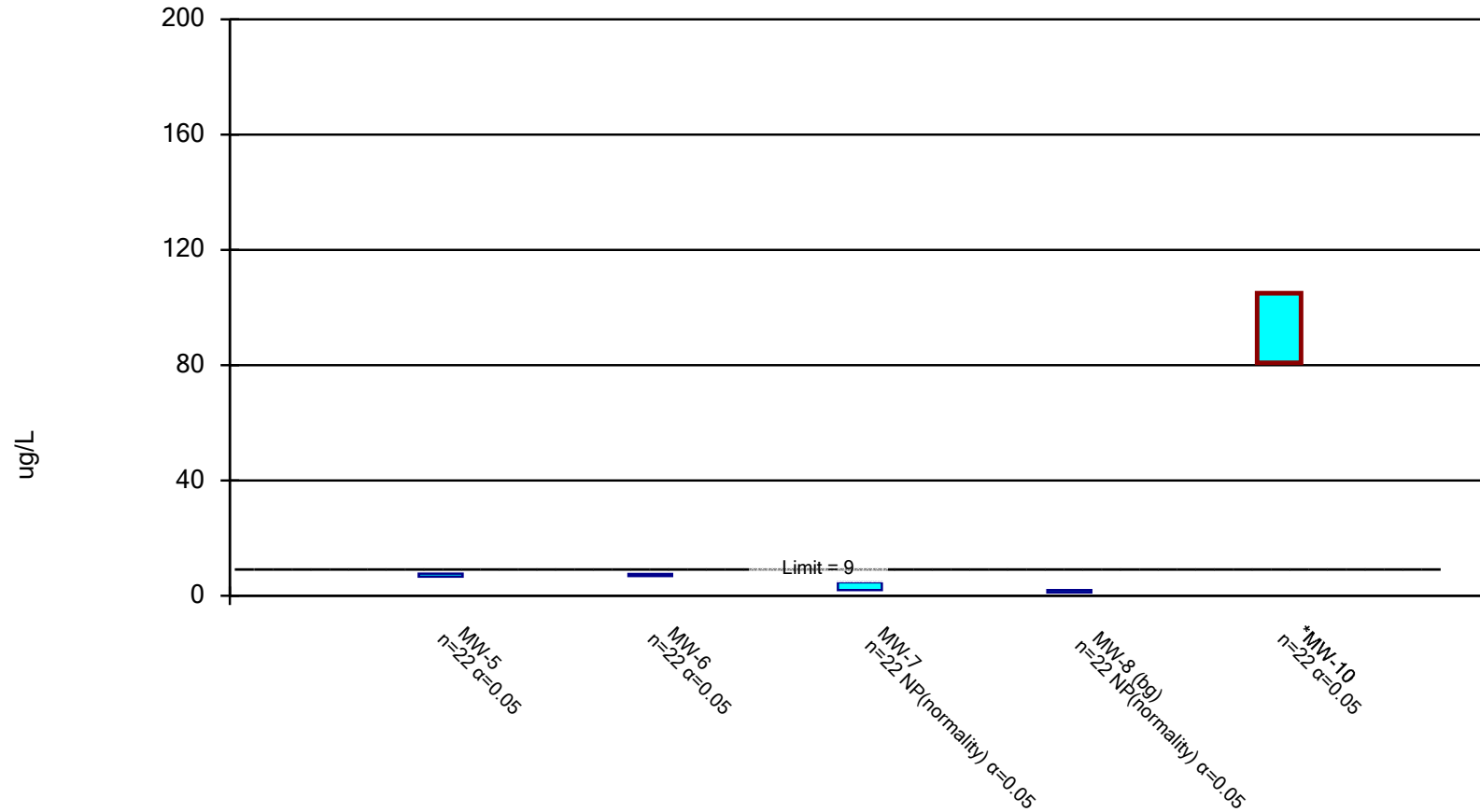
Confidence Interval

Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile Printed 7/3/2024, 10:29 AM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Cobalt (ug/L)	MW-10	105	80.86	9	Yes	22	0	No	0.05	Param.

Parametric and Non-Parametric (NP) Confidence Interval

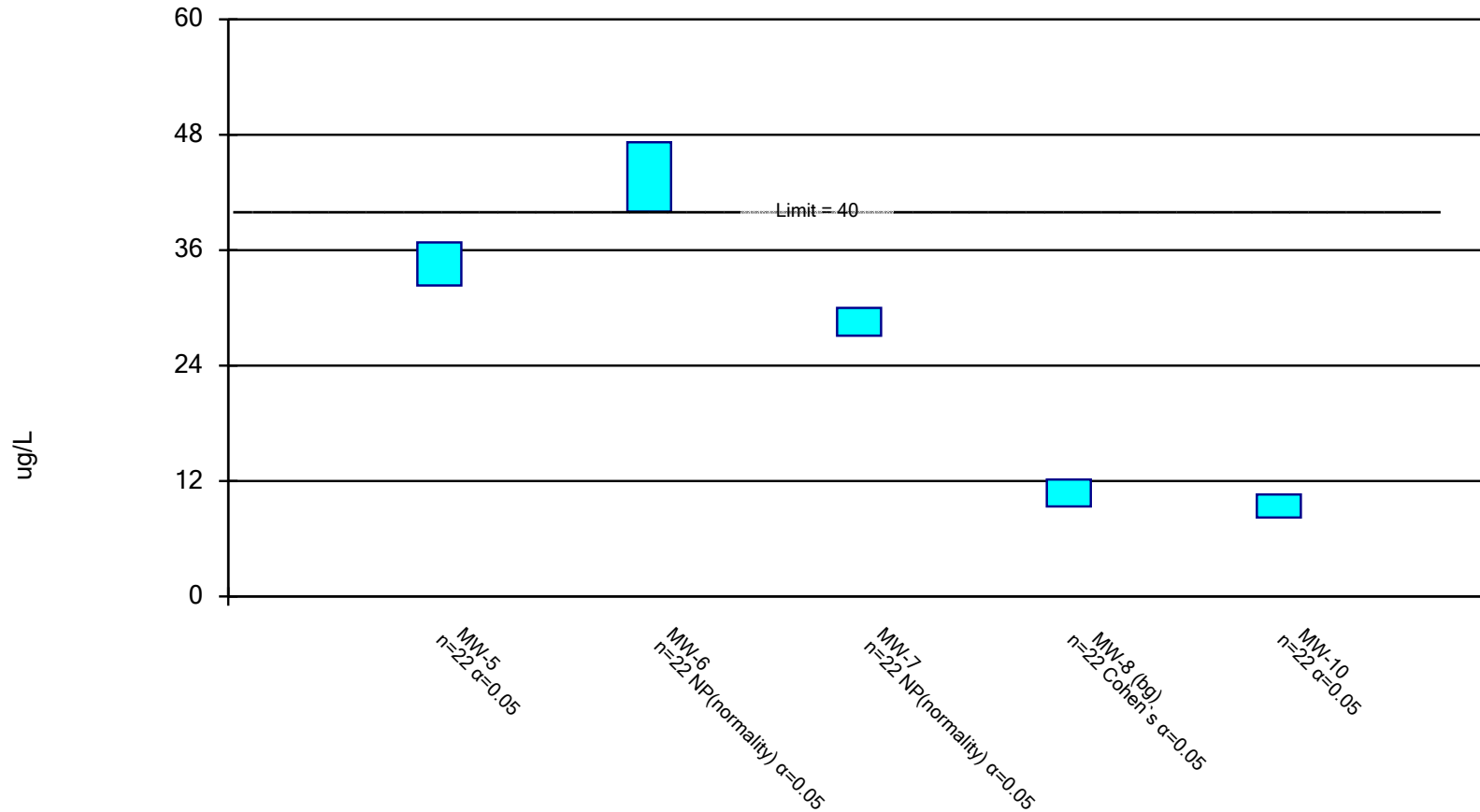
Compliance limit is exceeded.* Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 7/3/2024 10:28 AM View: BREC Wilson GW
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 7/3/2024 10:28 AM View: BREC Wilson GW
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile



January 14, 2025

Mr. Mark Bertram
Big Rivers Electric Corporation
Administrative Services
Director Environmental Services
710 West 2nd Street
Owensboro, KY 42301

Re: Statistical Evaluation of September and October 2024 Assessment Monitoring
Groundwater Data
D.B. Wilson Station Phase II CCR Landfill in Centertown, Kentucky
Agency Interest ID #: 3319

Dear Mr. Bertram:

This letter presents the results of the statistical evaluation of analytical data from the September and October 2024 assessment monitoring event performed at the D.B. Wilson Station Phase II CCR Landfill in Centertown, Kentucky in accordance with the requirements of the U.S. Environmental Protection Agency's *Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments* (40 Code of Federal Regulations [CFR] Part 257, Subpart D). This letter also presents a comparison of the September and October 2024 sampling results to groundwater protection standards (GWPSs). The GWPSs for the groundwater monitoring network were reviewed and updated as part of the statistical evaluation completed for the September and October 2024 sampling event and are presented on **Table 1**. These GWPSs will continue to be reviewed and updated as additional data are collected. A comparison of the September and October 2024 data to the updated GWPSs is presented on **Table 2**. The statistical evaluation presented herein was performed in accordance with the *Update to Certification of Statistical Method for Evaluating Groundwater in accordance with 40 CFR § 257.93 at D.B Wilson Station Phase II CC Landfill in Centertown, Kentucky* dated May 25, 2022.

In September and October 2024, the Phase II CCR Landfill Groundwater Monitoring Well Network was sampled for Appendix III and Appendix IV parameters per the requirements of 40 CFR §257.95(d)(1). Interwell prediction limit statistical analyses were performed for these well/constituent pairs and are discussed subsequently. GWPSs were also developed in accordance with 40 CFR §257.95(h), which describes a GWPS as one of the following: the higher value between a statistically calculated background concentration for an analyte; the established maximum concentration limit (MCL); or the GWPS criteria for select Appendix IV parameters without an MCL presented in 40 CFR §257.95(h)(2). This letter presents the results of the statistical evaluation of the September and October 2024 assessment monitoring event for inclusion in the Phase II CCR Landfill Operating Record.

Mr. Mark Bertram
Big Rivers Electric Corporation
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Statistical Evaluation of Phase II CCR Landfill Compliance Monitoring Well Network Evaluation

A review of the interwell prediction limit evaluation was performed to compare the September and October 2024 concentrations of Appendix III and Appendix IV parameters observed at CCR downgradient compliance monitoring wells MW-5, MW-6, MW-7, and MW-10 to calculated prediction limits (i.e., background limits) that were established using data collected from April of 2016 through October of 2024 from upgradient monitoring well MW-8. Note, any data qualified as rejected or considered an outlier (statistically or flagged using professional judgment) during the data review were excluded from the statistical analysis. Certain parameters were detected in September and October 2024 at concentrations above the calculated background limits (equivalent to the MW-8 prediction limits), and a summary is included in **Attachment 1**. This included the following well/constituent pairs for downgradient compliance monitoring wells with statistically significant increases (SSIs) above calculated background limits:

Appendix III Parameters:

- Boron (MW-5, MW-6, MW-7, and MW-10)
- Calcium (MW-5, MW-6, MW-7, and MW-10)
- Chloride (MW-5, MW-6, MW-7, and MW-10)
- Total Dissolved Solids (TDS) (MW-5, MW-6, MW-7 and MW-10)

Appendix IV Parameters:

- Cobalt (MW-10)
- Lithium (MW-5, MW-6 and MW-7)
- Mercury (MW-10)

Results of exceedances of background were generally consistent with the April 2024 statistical results. Sulfate (MW-5, MW-6, and MW-7) SSIs were present in April 2024, but were not present in this event. Additionally, the TDS (MW-7) SSI that was exhibited in this event was not present in the April 2024 event. Mercury (MW-10) was not historically been an SSI and has historically been non-detect until 2024. All other above-noted Appendix III and Appendix IV SSIs continue to occur at downgradient compliance monitoring wells in the September and October 2024 statistical analysis. Regarding the initial SSI for mercury, the field blank and several wells for this sampling event exhibited mercury detections that were not consistent with historical data. The ambient air sample (Field Blank) was collected at MW-5 and yielded a concentration significantly over its reporting limit. The laboratory was contacted to confirm these mercury results and indicated no presence of carryover was evident in the laboratory preparation and

Mr. Mark Bertram
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analysis procedures. However, corresponding mercury field blanks were also collected at each well, and these were all non-detect, further indicating suspicion of these mercury detections. Because of this, these detections were not rejected during the data validation based on the suspicion of carryover. All mercury detections were qualified as estimated (J) based on professional judgment. Verification sampling for these mercury detections will be performed in Spring 2025 at the next semiannual sampling event. At that time, if these mercury detections are no longer present, these 2nd Half 2024 data may be revisited and rejected as anomalous results and excluded from subsequent statistical analyses following the verification sampling event next Spring 2025.

The Appendix IV constituents with SSIs (cobalt and lithium) were further evaluated to determine whether they are present at statistically significant levels (SSLs) over the GWPS by calculating the lower confidence limit (LCL) at 95% confidence for each well and constituent using the Baseline, Detection, and Assessment monitoring results collected to date from each monitoring well. For a constituent to be present at an SSL over the GWPS, its LCL must be greater than the GWPS. The comparison of the calculated LCLs with the GWPSs for cobalt and lithium at downgradient compliance monitoring wells MW-5, MW-6, MW-7, and MW-10 resulted in the following well/constituent pair(s) with a SSL above the GWPS:

- Cobalt (MW-10)

The LCLs for the remaining well/constituent pairs for cobalt and lithium were either equal to or less than the GWPS; thus, are not considered SSLs. **Attachment 1** provides a summary of the calculated LCLs in comparison with the GWPSs. The cobalt SSL above the GWPS was consistent with the April/October 2023 and April 2024 results as cobalt at MW-10 was reported as SSLs in the past three events. Lithium at MW-6 was reported as an SSL in the April/October 2023 events; however, it was not present as an SSL in this event nor the April 2024 event (LCL was equal to the GWPS).

Given that certain Appendix III and IV constituents were observed within the Phase II CCR Landfill groundwater monitoring network at concentrations above their respective calculated background limit and/or the LCL for certain Appendix IV constituents was greater than the corresponding GWPSs, these results do not warrant a transition to detection monitoring per the requirements of 40 CFR §257.95(f) and assessment monitoring will continue for the next first half semiannual monitoring event in 2025.



Mr. Mark Bertram
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Sincerely,

Burns & McDonnell Engineering Company, Inc.

A handwritten signature in blue ink that reads "Chris Hoglund". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Chris Hoglund, PG
Project Manager

Attachments:

Table 1 – Calculated Background and Groundwater Protection Standards for Groundwater

Table 2 – Summary of September and October 2024 Analytical Results

Attachment 1 – Sanitas™ Statistical Outputs for Phase II CCR Landfill Compliance Monitoring Network

cc: Diana Merritt, BREC Wilson Station

TABLES

Table 1
Calculated Background and Groundwater Protection Standards for Groundwater
D.B. Wilson Station Phase II CCR Landfill in Centertown, Kentucky

Detection Monitoring Constituents (Appendix III)	Units	Background*	MCL	40 CFR §257.95(h)(2) Criteria	Groundwater Protection Standard
Boron	mg/L	0.0518	--	--	--
Calcium	mg/L	349	--	--	--
pH	SU	4.67 - 6.84	--	--	--
Total Dissolved Solids	mg/L	1842	--	--	--
Chloride	mg/L	5.546	--	--	--
Fluoride	mg/L	0.4533	4	--	4
Sulfate	mg/L	2180	--	--	--
Assessment Monitoring Constituents (Appendix IV)	Units	Background*	MCL	40 CFR §257.95(h)(2) Criteria	Groundwater Protection Standard
Antimony	mg/L	0.0025	0.006	--	0.006
Arsenic	mg/L	0.0144	0.01	--	0.0144
Barium	mg/L	0.07	2	--	2
Beryllium	mg/L	0.002	0.004	--	0.004
Cadmium	mg/L	0.0005	0.005	--	0.005
Chromium	mg/L	0.0224	0.1	--	0.1
Cobalt	mg/L	0.009	--	0.006	0.009
Fluoride	mg/L	0.4533	4	--	4
Lead	mg/L	0.012	--	0.015	0.015
Lithium	mg/L	0.02	--	0.04	0.04
Mercury	mg/L	0.0000038	0.002	--	0.002
Molybdenum	mg/L	0.0187	--	0.1	0.1
Combined Radium 226 and 228**	pCi/L	2.94	5	--	5
Selenium	mg/L	0.0015	0.05	--	0.05
Thallium	mg/L	0.001	0.002	--	0.002

Notes:

*Background concentrations were determined utilizing interwell prediction limits (Attachment 1). Upgradient Monitoring Well MW-8 was used to calculate background concentrations. This included background data ranging from April 2016 through September/October 2024. For pH, background is between those values presented.

**Combined radium is reported with an uncertainty range. However, this range cannot be incorporated into statistical calculations as it varies per result and is not a standard value. Therefore, to maintain consistency in reporting these results, the reported laboratory concentration was used for the statistical analyses.

CFR - Code of Federal Regulations

mg/L - milligrams per Liter

pCi/L - picocuries per Liter

MCL - Maximum Contaminant Level

SU - standard units

Table 2
Summary of September and September-October 2024 Analytical Results
D.B. Wilson Station Phase II CCR Landfill in Centertown, Kentucky

Sample Location: Sample Date: Laboratory ID(s): All analytes excl. Radium/Radium only Note(s):			2nd Half 2024 Calculated Background ¹	GWPS ²	MW-5 10/1/2024 4101343-11 Downgradient	MW-6 9/30/2024 4101343-13 Downgradient	MW-7 10/1/2024 4101343-15 Downgradient	MW-8 9/30/2024 4101343-17 Upgradient Well	MW-10 9/30/2024 4101343-19 Downgradient
Analytical Method	Analyte	Unit			CCR Compliance Monitoring Well Network				
Appendix III - Detection Monitoring									
6010B	Boron	mg/L	0.0518	--	0.88	1.00 D1, M2	3.33 D1	0.10 U	0.46
6010B	Calcium	mg/L	349	--	620 D1	475 D1, M3	405 D1	220 D1	437 D1
In Situ	pH	SU	4.67 - 6.84	--	6.32	6.56	6.48	6.66	5.92
2540 C-2015	Total Dissolved Solids	mg/L	1842	--	3000	2640	2260	1440	3210
300.0 REV 2.1	Chloride	mg/L	5.546	--	275 D	46.3	104	4.0	62.3
300.0 REV 2.1	Fluoride	mg/L	0.4533	4	0.20 U	0.21	0.25	0.27	0.20 U
300.0 REV 2.1	Sulfate	mg/L	2180	--	1790 D	1500 D	1070 D	711 D	1960 D
Appendix IV - Assessment Monitoring									
6020A	Antimony	mg/L	0.0025	0.006	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
6020A	Arsenic	mg/L	0.0144	0.0144	0.0026	0.0049	0.0040	0.0060	0.0025
6020A	Barium	mg/L	0.07	2	0.010	0.011	0.012	0.022	0.009
6020A	Beryllium	mg/L	0.002	0.004	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U
6020A	Cadmium	mg/L	0.0005	0.005	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0001 J
6020A	Chromium	mg/L	0.0224	0.1	0.0020 U	0.0020 U	0.0020 U	0.0031	0.0006 J
6020A	Cobalt	mg/L	0.009	0.009	0.005	0.007	0.004 U	0.004 U	0.082
300.0 REV 2.1	Fluoride	mg/L	0.4533	4	0.20 U	0.21	0.25	0.27	0.20 U
6020A	Lead	mg/L	0.012	0.015	0.002 U	0.002 U	0.002 U	0.001 J	0.002 U
6020A	Lithium	mg/L	0.02	0.04	0.04	0.04	0.03	0.009 J	0.007 J
245.7 REV 2	Mercury	mg/L	0.0000038	0.002	5.0 U	5.0 M2, UJ	5.0 U	0.0000038 J	0.0000041 J
6020A	Molybdenum	mg/L	0.0187	0.1	0.005 J	0.007 J	0.005 J	0.01	0.01 U
903.1/904.0	Combined Radium 226 and 228 ³	pCi/l	2.94	5	1.79 J	0.853 J	0.570 J	0.300 J	0.705 J
6020A	Selenium	mg/L	0.0015	0.05	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
6020A	Thallium	mg/L	0.001	0.002	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U

Notes

1 - Background concentrations were determined utilizing interwell prediction limits. Upgradient well MW-8 was used to determine these background concentrations. This included data ranging from April 2016 through OOctober 2024. For pH, background is between those values presented.

2 - GWPSs were developed in accordance with §257.95(h).

3 - Combined radium is reported with an associate range. However, this range cannot be incorporated into statistical calculations as it varies per result and is not a standard value. Therefore, to maintain consistency in reporting these results, the reported laboratory concentration was used for the statistical analyses.

Bold - Analyte detected above calculated background concentration.

Parameter was detected in compliance monitoring well located downgradient of the CCR Landfill at a statistically significant level above its GWPS (see Confidence Interval statistical output in Attachment 1).

CCR - coal combustion residuals

D - Results reported from dilution.

D1 - Sample required dilution due to high concentration of target analyte.

GWPS - Groundwater Protection Standard

J - estimated concentration

M2 - Matrix spike recovery was low; the method control sample recovery was acceptable.

M3 - The accuracy of the spike recovery value is reduced since the analyte concentration in the sample is disproportionate to spike level. The method control sample recovery was acceptable.

mg/L - milligram per liter

pCi/L - picocurie per liter

SU - standard unit

U - Nondetect

UJ - Estimated at the reporting limit

ATTACHMENT 1 – SANITAS™ STATISTICAL OUTPUTS FOR PHASE II CCR
LANDFILL COMPLIANCE MONITORING NETWORK

Prediction Limit

Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile Printed 12/16/2024, 12:29 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Antimony (mg/L)	MW-5	0.0025	n/a	10/1/2024	0.0025ND	No	23	65.22	n/a	0.03929	NP Inter (NDs)
Antimony (mg/L)	MW-6	0.0025	n/a	9/30/2024	0.0025ND	No	23	65.22	n/a	0.03929	NP Inter (NDs)
Antimony (mg/L)	MW-7	0.0025	n/a	10/1/2024	0.0025ND	No	23	65.22	n/a	0.03929	NP Inter (NDs)
Antimony (mg/L)	MW-10	0.0025	n/a	9/30/2024	0.0025ND	No	23	65.22	n/a	0.03929	NP Inter (NDs)
Arsenic (ug/L)	MW-5	14.4	n/a	10/1/2024	2.6	No	23	0	n/a	0.03929	NP Inter (normality)
Arsenic (ug/L)	MW-6	14.4	n/a	9/30/2024	4.9	No	23	0	n/a	0.03929	NP Inter (normality)
Arsenic (ug/L)	MW-7	14.4	n/a	10/1/2024	4	No	23	0	n/a	0.03929	NP Inter (normality)
Arsenic (ug/L)	MW-10	14.4	n/a	9/30/2024	2.5	No	23	0	n/a	0.03929	NP Inter (normality)
Barium (ug/L)	MW-5	70	n/a	10/1/2024	10	No	22	0	n/a	0.0409	NP Inter (normality)
Barium (ug/L)	MW-6	70	n/a	9/30/2024	11	No	22	0	n/a	0.0409	NP Inter (normality)
Barium (ug/L)	MW-7	70	n/a	10/1/2024	12	No	22	0	n/a	0.0409	NP Inter (normality)
Barium (ug/L)	MW-10	70	n/a	9/30/2024	9	No	22	0	n/a	0.0409	NP Inter (normality)
Beryllium (ug/L)	MW-5	2	n/a	10/1/2024	1ND	No	22	100	n/a	0.0409	NP Inter (NDs)
Beryllium (ug/L)	MW-6	2	n/a	9/30/2024	1ND	No	22	100	n/a	0.0409	NP Inter (NDs)
Beryllium (ug/L)	MW-7	2	n/a	10/1/2024	1ND	No	22	100	n/a	0.0409	NP Inter (NDs)
Beryllium (ug/L)	MW-10	2	n/a	9/30/2024	1ND	No	22	100	n/a	0.0409	NP Inter (NDs)
Boron (ug/L)	MW-5	51.8	n/a	10/1/2024	880	Yes	24	54.17	n/a	0.0378	NP Inter (NDs)
Boron (ug/L)	MW-6	51.8	n/a	9/30/2024	1000	Yes	24	54.17	n/a	0.0378	NP Inter (NDs)
Boron (ug/L)	MW-7	51.8	n/a	10/1/2024	3330	Yes	24	54.17	n/a	0.0378	NP Inter (NDs)
Boron (ug/L)	MW-10	51.8	n/a	9/30/2024	460	Yes	24	54.17	n/a	0.0378	NP Inter (NDs)
Cadmium (ug/L)	MW-5	0.5	n/a	10/1/2024	0.5ND	No	22	90.91	n/a	0.0409	NP Inter (NDs)
Cadmium (ug/L)	MW-6	0.5	n/a	9/30/2024	0.5ND	No	22	90.91	n/a	0.0409	NP Inter (NDs)
Cadmium (ug/L)	MW-7	0.5	n/a	10/1/2024	0.5ND	No	22	90.91	n/a	0.0409	NP Inter (NDs)
Cadmium (ug/L)	MW-10	0.5	n/a	9/30/2024	0.1J	No	22	90.91	n/a	0.0409	NP Inter (NDs)
Calcium (ug/L)	MW-5	349000	n/a	10/1/2024	620000	Yes	24	0	n/a	0.0378	NP Inter (normality)
Calcium (ug/L)	MW-6	349000	n/a	9/30/2024	475000	Yes	24	0	n/a	0.0378	NP Inter (normality)
Calcium (ug/L)	MW-7	349000	n/a	10/1/2024	405000	Yes	24	0	n/a	0.0378	NP Inter (normality)
Calcium (ug/L)	MW-10	349000	n/a	9/30/2024	437000	Yes	24	0	n/a	0.0378	NP Inter (normality)
Chloride (mg/L)	MW-5	5.546	n/a	10/1/2024	275	Yes	24	0	No	0.01	Param Inter
Chloride (mg/L)	MW-6	5.546	n/a	9/30/2024	46.3	Yes	24	0	No	0.01	Param Inter
Chloride (mg/L)	MW-7	5.546	n/a	10/1/2024	104	Yes	24	0	No	0.01	Param Inter
Chloride (mg/L)	MW-10	5.546	n/a	9/30/2024	62.3	Yes	24	0	No	0.01	Param Inter
Chromium (ug/L)	MW-5	22.4	n/a	10/1/2024	0.3ND	No	23	30.43	n/a	0.03929	NP Inter (normality)
Chromium (ug/L)	MW-6	22.4	n/a	9/30/2024	0.3ND	No	23	30.43	n/a	0.03929	NP Inter (normality)
Chromium (ug/L)	MW-7	22.4	n/a	10/1/2024	0.3ND	No	23	30.43	n/a	0.03929	NP Inter (normality)
Chromium (ug/L)	MW-10	22.4	n/a	9/30/2024	0.6J	No	23	30.43	n/a	0.03929	NP Inter (normality)
Cobalt (ug/L)	MW-5	9	n/a	10/1/2024	5	No	22	50	n/a	0.0409	NP Inter (normality)
Cobalt (ug/L)	MW-6	9	n/a	9/30/2024	7	No	22	50	n/a	0.0409	NP Inter (normality)
Cobalt (ug/L)	MW-7	9	n/a	10/1/2024	2ND	No	22	50	n/a	0.0409	NP Inter (normality)
Cobalt (ug/L)	MW-10	9	n/a	9/30/2024	82	Yes	22	50	n/a	0.0409	NP Inter (normality)
Fluoride (mg/L)	MW-5	0.4533	n/a	10/1/2024	1ND	No	21	0	ln(x)	0.01	Param Inter
Fluoride (mg/L)	MW-6	0.4533	n/a	9/30/2024	0.21	No	21	0	ln(x)	0.01	Param Inter
Fluoride (mg/L)	MW-7	0.4533	n/a	10/1/2024	0.25	No	21	0	ln(x)	0.01	Param Inter
Fluoride (mg/L)	MW-10	0.4533	n/a	9/30/2024	1ND	No	21	0	ln(x)	0.01	Param Inter
Lead (ug/L)	MW-5	12	n/a	10/1/2024	1ND	No	23	65.22	n/a	0.03929	NP Inter (NDs)
Lead (ug/L)	MW-6	12	n/a	9/30/2024	1ND	No	23	65.22	n/a	0.03929	NP Inter (NDs)
Lead (ug/L)	MW-7	12	n/a	10/1/2024	1ND	No	23	65.22	n/a	0.03929	NP Inter (NDs)
Lead (ug/L)	MW-10	12	n/a	9/30/2024	1ND	No	23	65.22	n/a	0.03929	NP Inter (NDs)
Lithium (ug/L)	MW-5	20	n/a	10/1/2024	40	Yes	23	17.39	n/a	0.03929	NP Inter (Cohens/xform)
Lithium (ug/L)	MW-6	20	n/a	9/30/2024	40	Yes	23	17.39	n/a	0.03929	NP Inter (Cohens/xform)

Prediction Limit

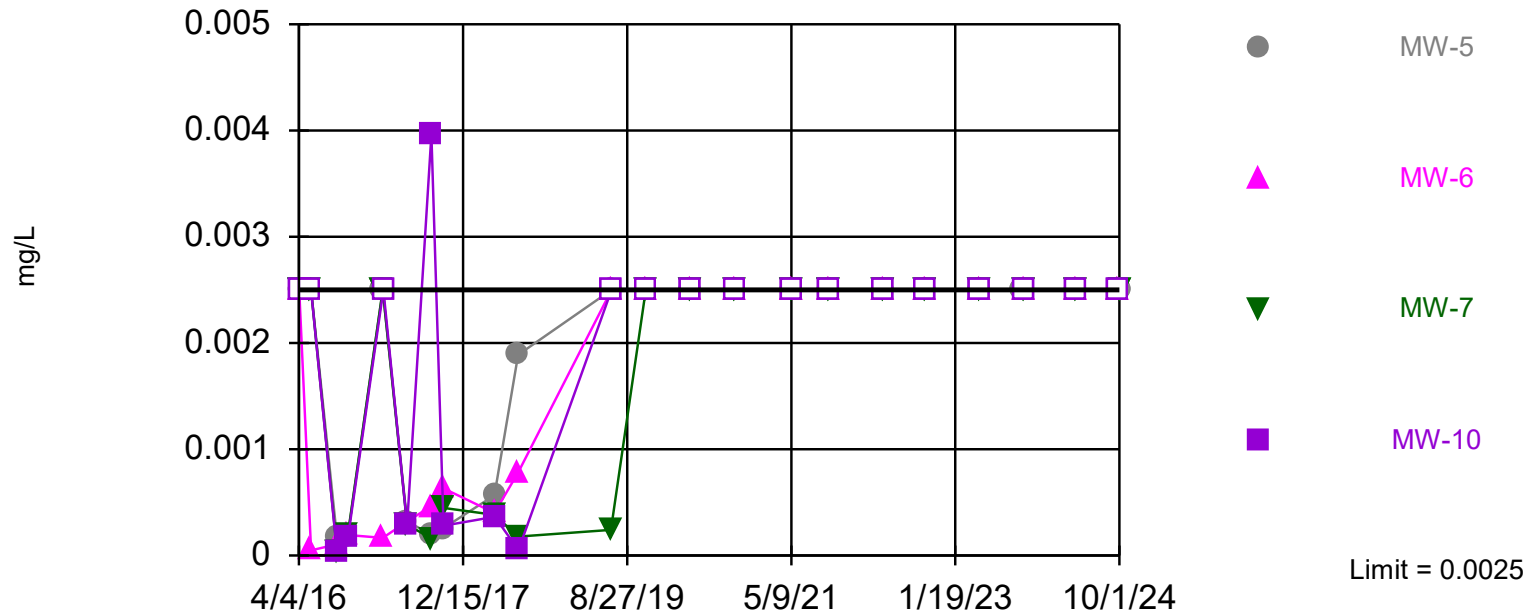
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile Printed 12/16/2024, 12:29 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Lithium (ug/L)	MW-7	20	n/a	10/1/2024	30	Yes	23	17.39	n/a	0.03929	NP Inter (Cohens/xform)
Lithium (ug/L)	MW-10	20	n/a	9/30/2024	7J	No	23	17.39	n/a	0.03929	NP Inter (Cohens/xform)
Mercury (ug/L)	MW-5	0.0038	n/a	10/1/2024	0.0025ND	No	22	95.45	n/a	0.0409	NP Inter (NDs)
Mercury (ug/L)	MW-6	0.0038	n/a	9/30/2024	0.0025ND	No	22	95.45	n/a	0.0409	NP Inter (NDs)
Mercury (ug/L)	MW-7	0.0038	n/a	10/1/2024	0.0025ND	No	22	95.45	n/a	0.0409	NP Inter (NDs)
Mercury (ug/L)	MW-10	0.0038	n/a	9/30/2024	0.0041	Yes	22	95.45	n/a	0.0409	NP Inter (NDs)
Molybdenum (ug/L)	MW-5	18.7	n/a	10/1/2024	5J	No	23	0	n/a	0.03929	NP Inter (normality)
Molybdenum (ug/L)	MW-6	18.7	n/a	9/30/2024	7J	No	23	0	n/a	0.03929	NP Inter (normality)
Molybdenum (ug/L)	MW-7	18.7	n/a	10/1/2024	5J	No	23	0	n/a	0.03929	NP Inter (normality)
Molybdenum (ug/L)	MW-10	18.7	n/a	9/30/2024	5ND	No	23	0	n/a	0.03929	NP Inter (normality)
pH (SU)	MW-5	6.84	4.67	10/1/2024	6.32	No	23	0	n/a	0.07859	NP Inter (normality)
pH (SU)	MW-6	6.84	4.67	9/30/2024	6.56	No	23	0	n/a	0.07859	NP Inter (normality)
pH (SU)	MW-7	6.84	4.67	10/1/2024	6.48	No	23	0	n/a	0.07859	NP Inter (normality)
pH (SU)	MW-10	6.84	4.67	9/30/2024	5.92	No	23	0	n/a	0.07859	NP Inter (normality)
Radium 226 + 228 (pCi/L)	MW-5	2.94	n/a	10/1/2024	1.79	No	22	0	n/a	0.0409	NP Inter (normality)
Radium 226 + 228 (pCi/L)	MW-6	2.94	n/a	9/30/2024	0.853	No	22	0	n/a	0.0409	NP Inter (normality)
Radium 226 + 228 (pCi/L)	MW-7	2.94	n/a	10/1/2024	0.57	No	22	0	n/a	0.0409	NP Inter (normality)
Radium 226 + 228 (pCi/L)	MW-10	2.94	n/a	9/30/2024	0.705	No	22	0	n/a	0.0409	NP Inter (normality)
Selenium (ug/L)	MW-5	1.5	n/a	10/1/2024	1.5ND	No	22	90.91	n/a	0.0409	NP Inter (NDs)
Selenium (ug/L)	MW-6	1.5	n/a	9/30/2024	1.5ND	No	22	90.91	n/a	0.0409	NP Inter (NDs)
Selenium (ug/L)	MW-7	1.5	n/a	10/1/2024	1.5ND	No	22	90.91	n/a	0.0409	NP Inter (NDs)
Selenium (ug/L)	MW-10	1.5	n/a	9/30/2024	1.5ND	No	22	90.91	n/a	0.0409	NP Inter (NDs)
Sulfate (mg/L)	MW-5	2180	n/a	10/1/2024	1790	No	24	0	n/a	0.0378	NP Inter (normality)
Sulfate (mg/L)	MW-6	2180	n/a	9/30/2024	1500	No	24	0	n/a	0.0378	NP Inter (normality)
Sulfate (mg/L)	MW-7	2180	n/a	10/1/2024	1070	No	24	0	n/a	0.0378	NP Inter (normality)
Sulfate (mg/L)	MW-10	2180	n/a	9/30/2024	1960	No	24	0	n/a	0.0378	NP Inter (normality)
Thallium (ug/L)	MW-5	1	n/a	10/1/2024	1ND	No	23	86.96	n/a	0.03929	NP Inter (NDs)
Thallium (ug/L)	MW-6	1	n/a	9/30/2024	1ND	No	23	86.96	n/a	0.03929	NP Inter (NDs)
Thallium (ug/L)	MW-7	1	n/a	10/1/2024	1ND	No	23	86.96	n/a	0.03929	NP Inter (NDs)
Thallium (ug/L)	MW-10	1	n/a	9/30/2024	1ND	No	23	86.96	n/a	0.03929	NP Inter (NDs)
Total Dissolved Solids (mg/L)	MW-5	1842	n/a	10/1/2024	3000	Yes	24	0	x^2	0.01	Param Inter
Total Dissolved Solids (mg/L)	MW-6	1842	n/a	9/30/2024	2640	Yes	24	0	x^2	0.01	Param Inter
Total Dissolved Solids (mg/L)	MW-7	1842	n/a	10/1/2024	2260	Yes	24	0	x^2	0.01	Param Inter
Total Dissolved Solids (mg/L)	MW-10	1842	n/a	9/30/2024	3210	Yes	24	0	x^2	0.01	Param Inter

Within Limit

Prediction Limit

Interwell Non-parametric



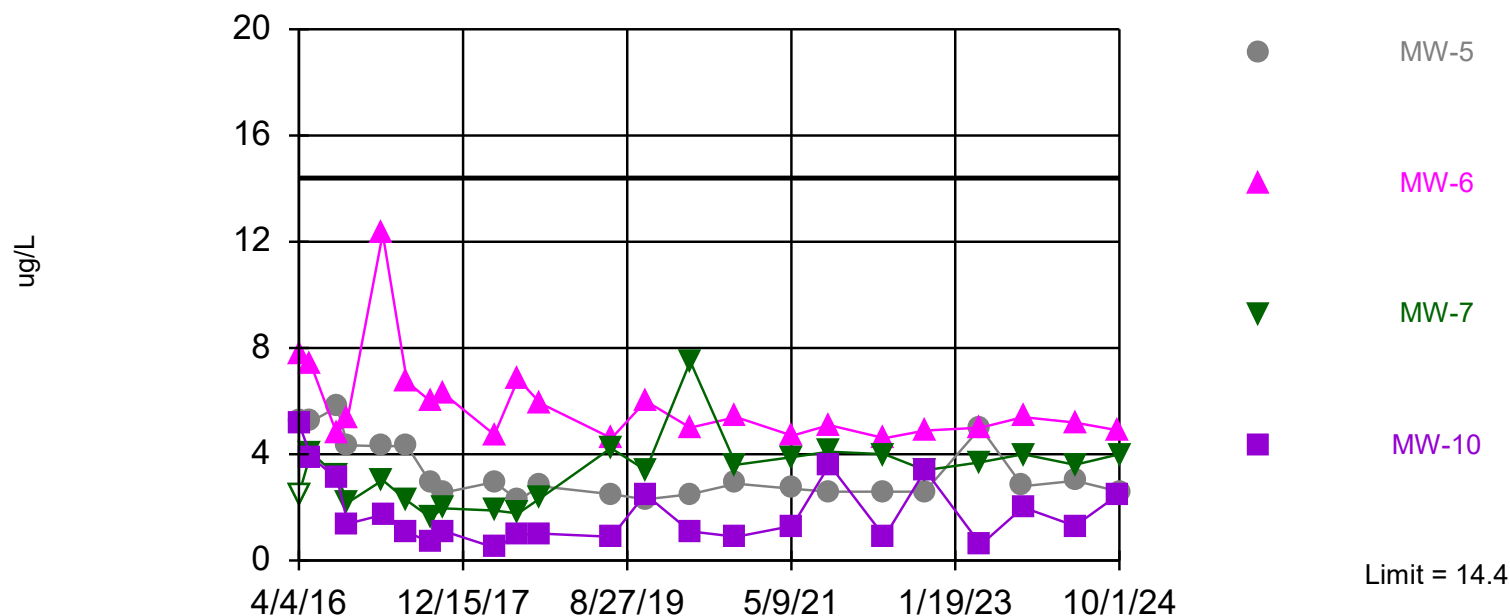
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 23 background values. 65.22% NDs. Report alpha = 0.1481. Individual comparison alpha = 0.03929. Most recent point for each compliance well compared to limit. Distribution was found to be non-normal after removal of suspect values, so outliers could not be identified. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Antimony Analysis Run 12/16/2024 12:27 PM View: BREC Wilson GW
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Within Limit

Prediction Limit

Interwell Non-parametric



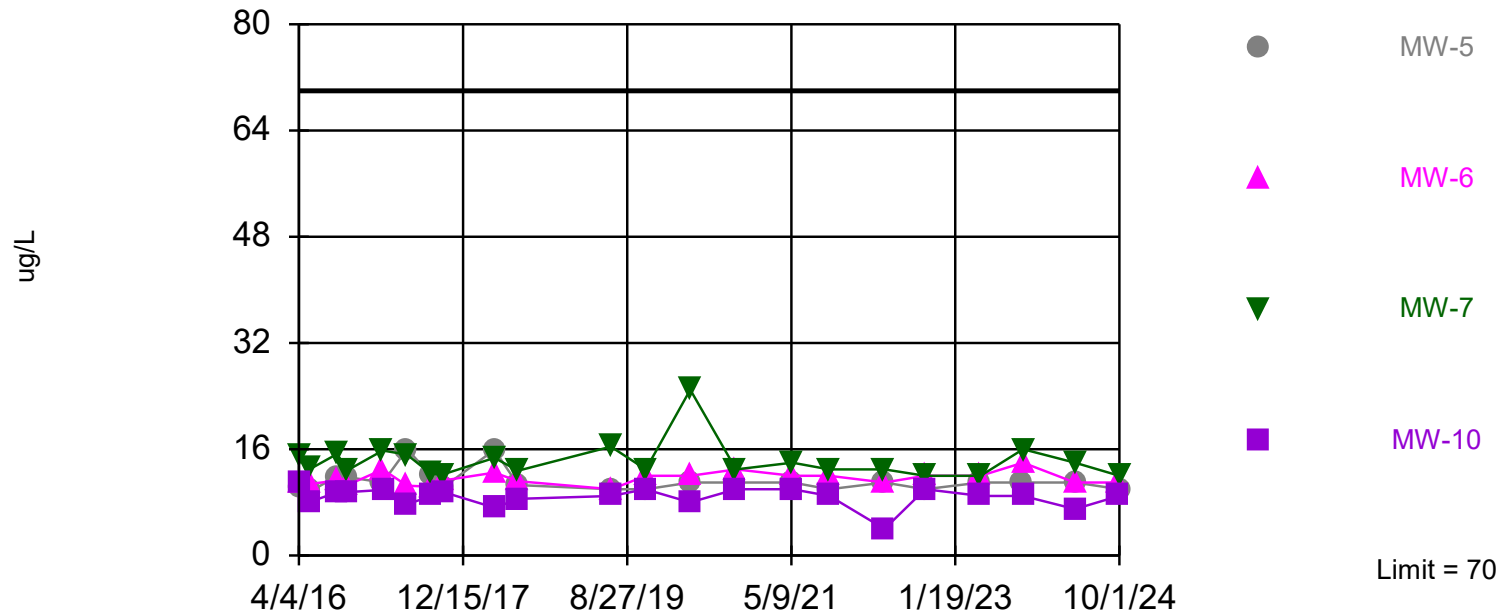
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 23 background values. Report alpha = 0.1481. Individual comparison alpha = 0.03929. Most recent point for each compliance well compared to limit. Distribution was found to be non-normal after removal of suspect values, so outliers could not be identified. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Arsenic Analysis Run 12/16/2024 12:27 PM View: BREC Wilson GW
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Within Limit

Prediction Limit

Interwell Non-parametric



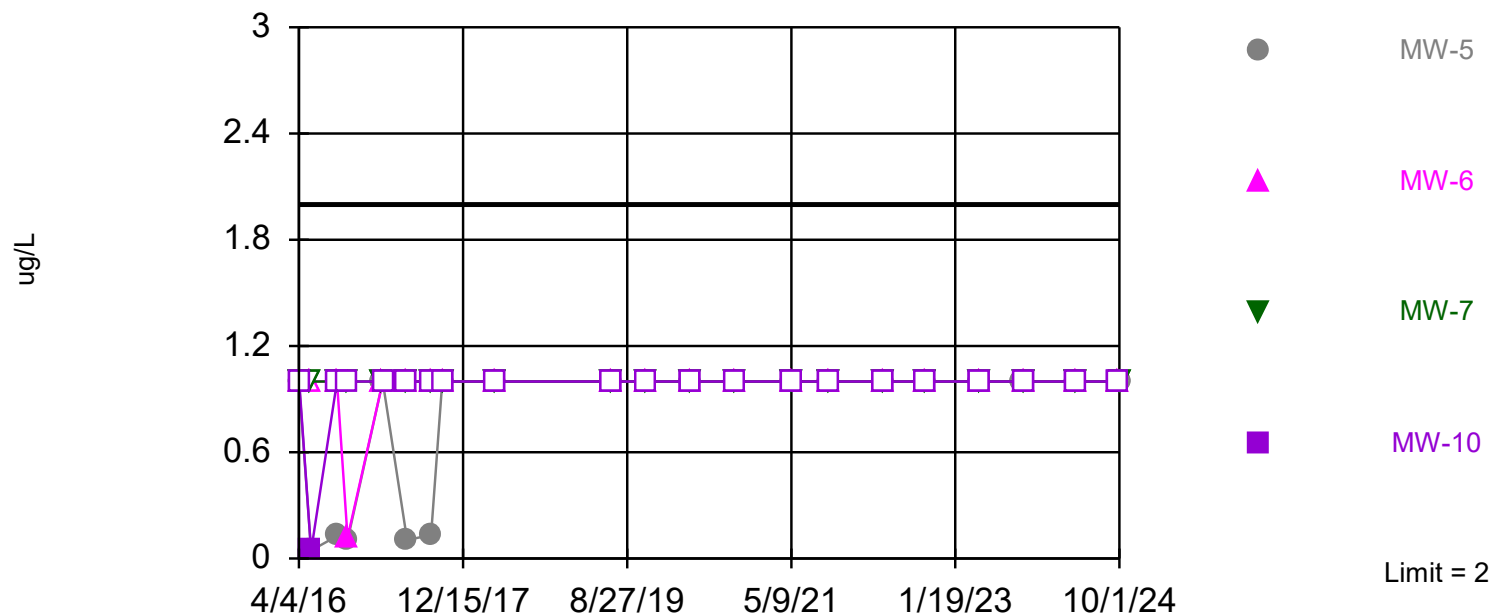
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 22 background values. Report alpha = 0.1538. Individual comparison alpha = 0.0409. Most recent point for each compliance well compared to limit. After outlier removal distribution was non-normal, so outlier results were invalidated. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Barium Analysis Run 12/16/2024 12:28 PM View: BREC Wilson GW
 Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Within Limit

Prediction Limit

Interwell Non-parametric

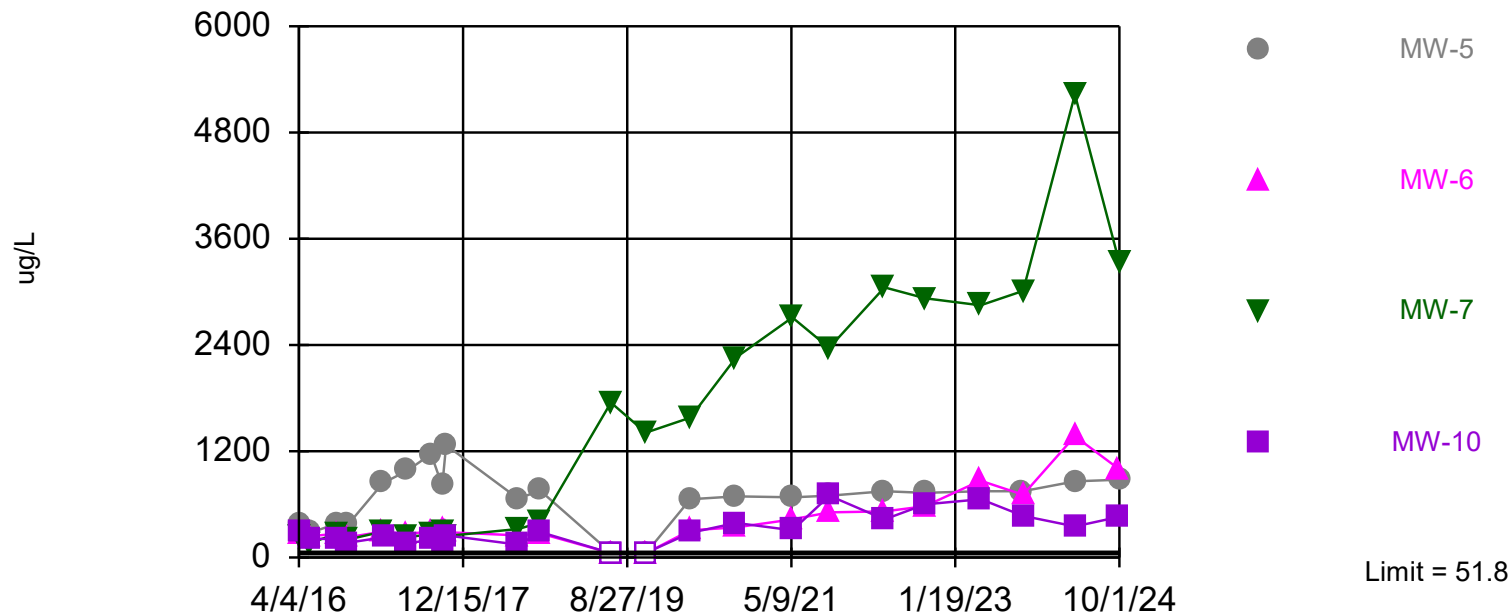


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 22$) were censored; limit is most recent reporting limit. Report $\alpha = 0.1538$. Individual comparison $\alpha = 0.0409$. Most recent point for each compliance well compared to limit. Distribution was found to be non-normal after removal of suspect values, so outliers could not be identified. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Beryllium Analysis Run 12/16/2024 12:28 PM View: BREC Wilson GW
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Exceeds Limit: MW-5, MW-6, MW-7, MW-10

Prediction Limit Interwell Non-parametric



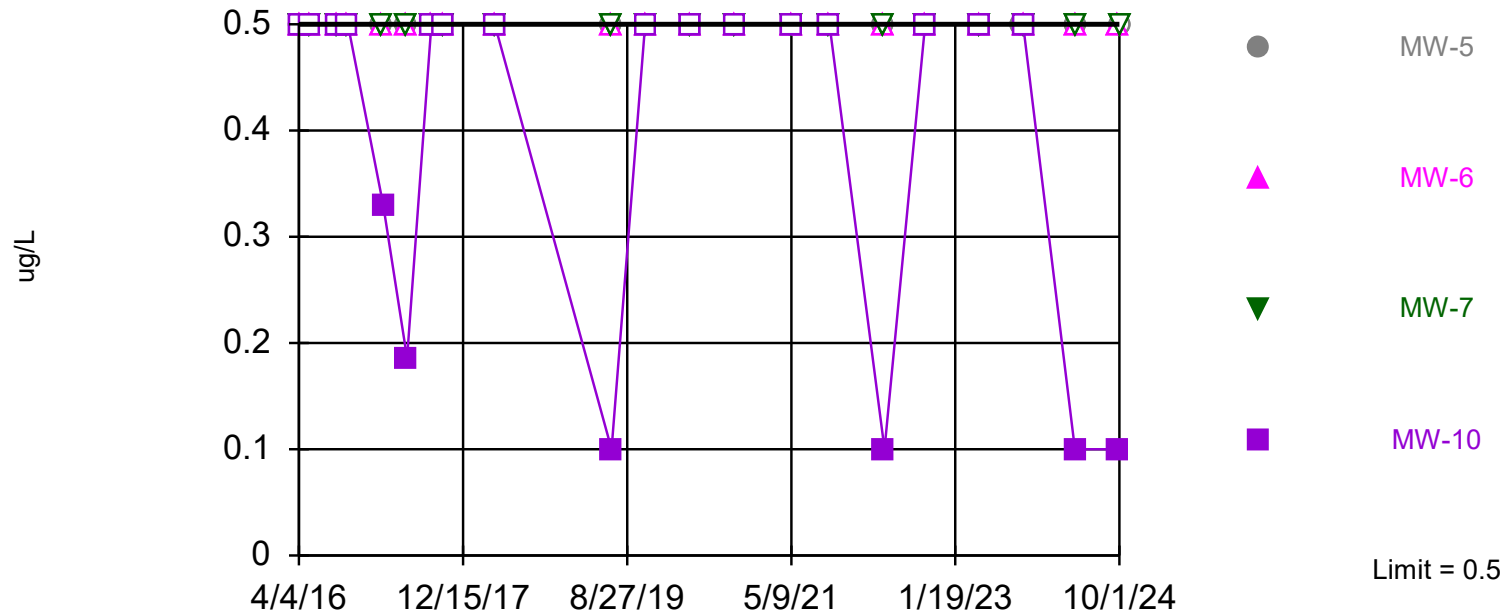
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 24 background values. 54.17% NDs. Report alpha = 0.1429. Individual comparison alpha = 0.0378. Most recent point for each compliance well compared to limit. Distribution was found to be non-normal after removal of suspect values, so outliers could not be identified. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Boron Analysis Run 12/16/2024 12:28 PM View: BREC Wilson GW
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Within Limit

Prediction Limit

Interwell Non-parametric

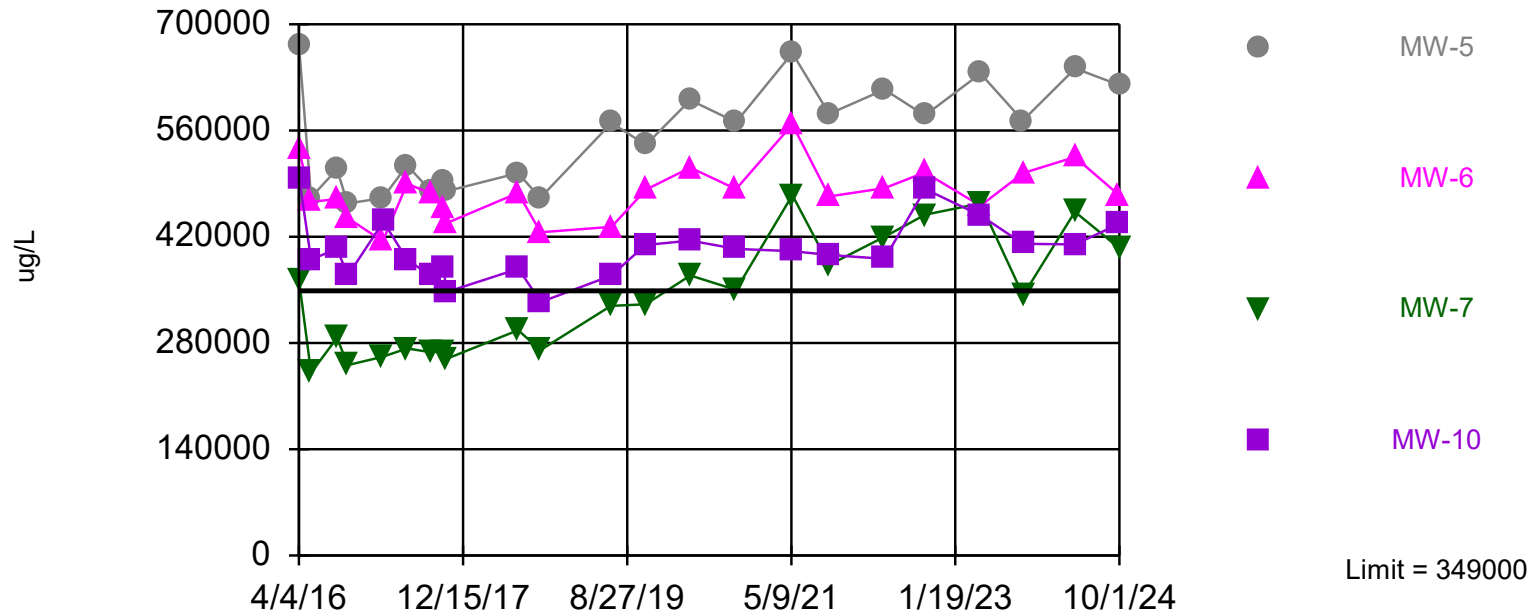


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 22 background values. 90.91% NDs. Report alpha = 0.1538. Individual comparison alpha = 0.0409. Most recent point for each compliance well compared to limit. Distribution was found to be non-normal after removal of suspect values, so outliers could not be identified. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Cadmium Analysis Run 12/16/2024 12:28 PM View: BREC Wilson GW
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Exceeds Limit: MW-5, MW-6, MW-7, MW-10

Prediction Limit Interwell Non-parametric



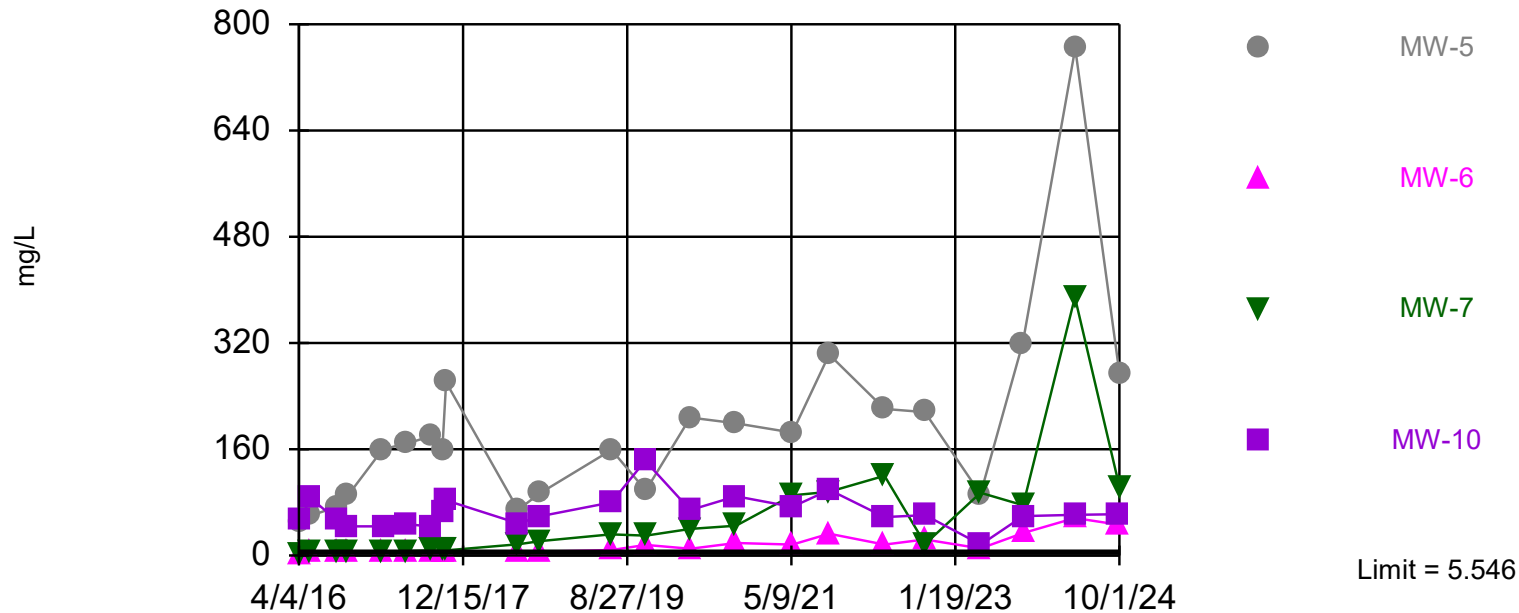
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 24 background values. Report alpha = 0.1429. Individual comparison alpha = 0.0378. Most recent point for each compliance well compared to limit. Distribution was found to be non-normal after removal of suspect values, so outliers could not be identified. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Calcium Analysis Run 12/16/2024 12:28 PM View: BREC Wilson GW
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Exceeds Limit: MW-5, MW-6, MW-7, MW-10

Prediction Limit

Interwell Parametric



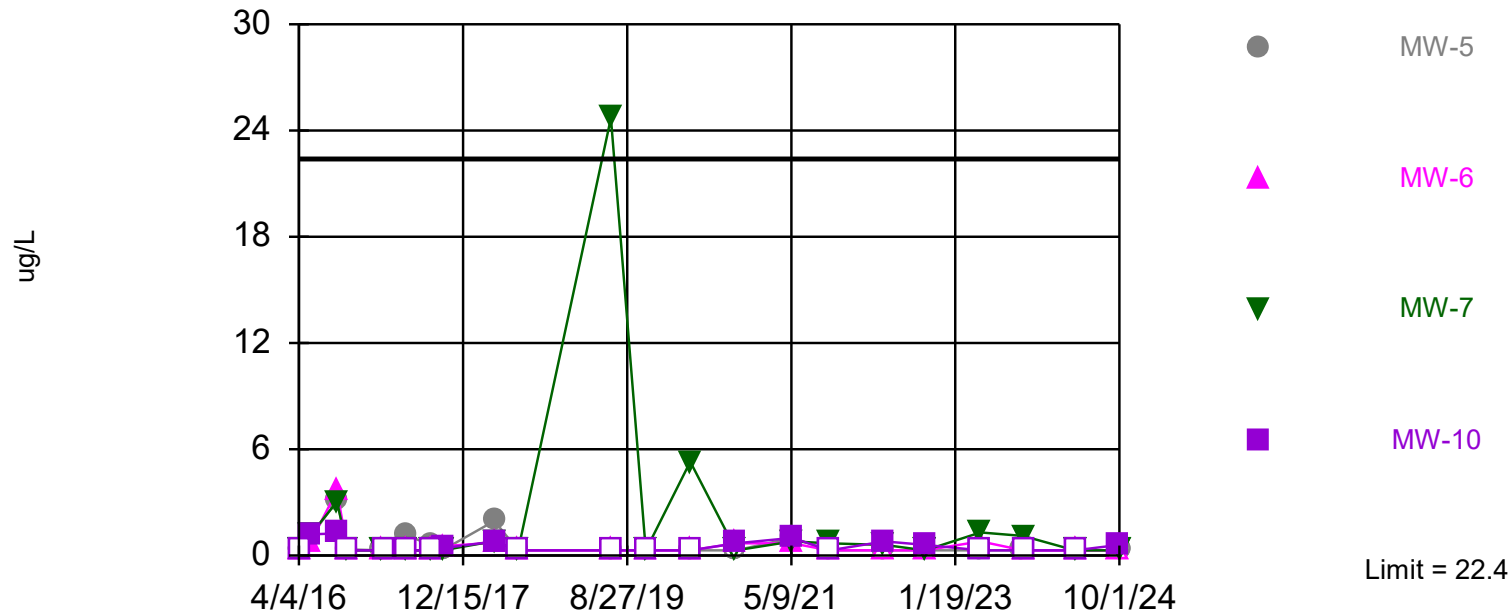
Background Data Summary: Mean=4.258, Std. Dev.=0.5052, n=24. Insufficient data to test for seasonality; not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9272, critical = 0.916. Report alpha = 0.0394. Individual comparison alpha = 0.01. Most recent point for each compliance well compared to limit. EPA 1989 outlier screening was performed on the background data. No background outliers were found.

Constituent: Chloride Analysis Run 12/16/2024 12:28 PM View: BREC Wilson GW
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Within Limit

Prediction Limit

Interwell Non-parametric



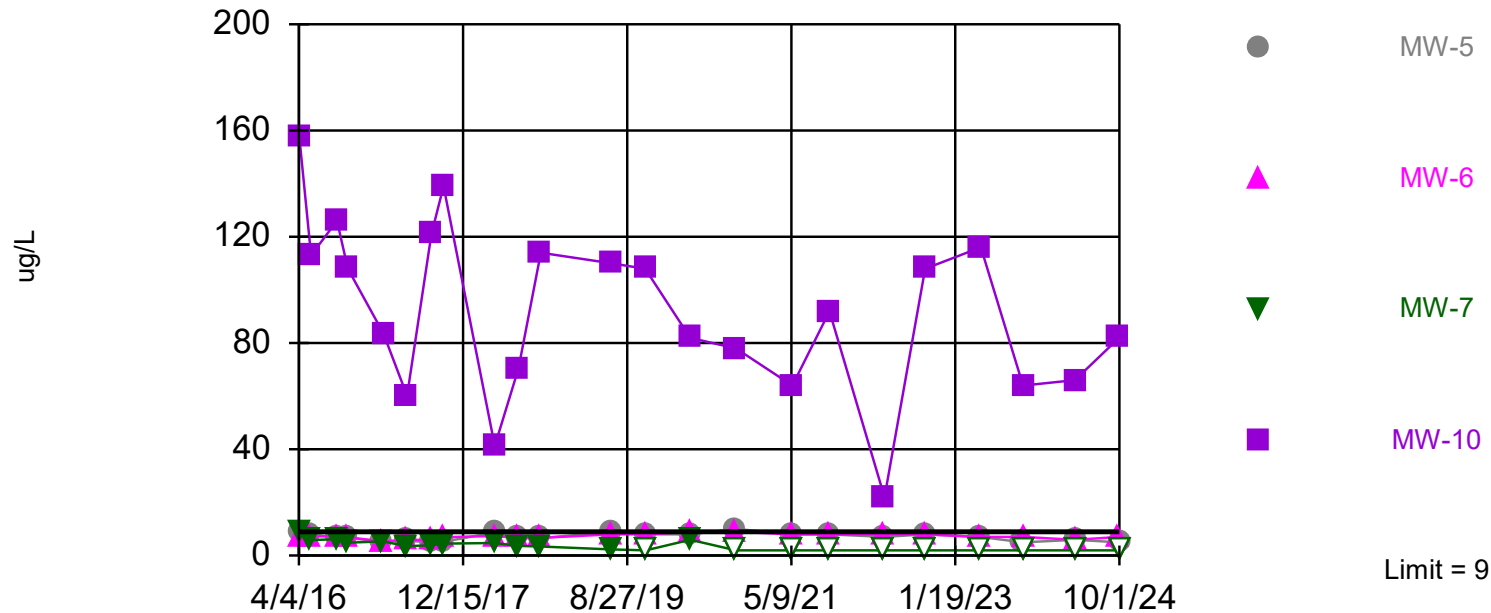
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 23 background values. 30.43% NDs. Report alpha = 0.1481. Individual comparison alpha = 0.03929. Most recent point for each compliance well compared to limit. After outlier removal distribution was non-normal, so outlier results were invalidated. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Chromium Analysis Run 12/16/2024 12:28 PM View: BREC Wilson GW
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Exceeds Limit: MW-10

Prediction Limit

Interwell Non-parametric



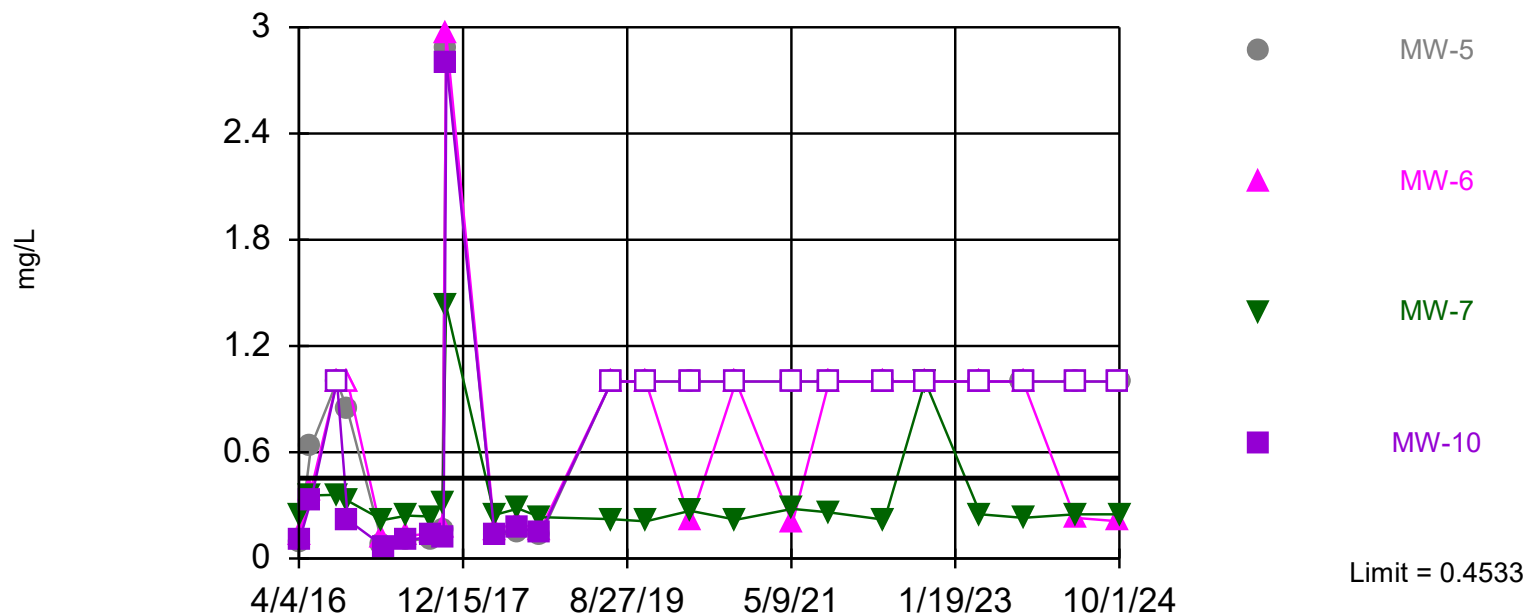
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 22 background values. 50% NDs. Report alpha = 0.1538. Individual comparison alpha = 0.0409. Most recent point for each compliance well compared to limit. After outlier removal distribution was non-normal, so outlier results were invalidated. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Cobalt Analysis Run 12/16/2024 12:28 PM View: BREC Wilson GW
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Within Limit

Prediction Limit

Interwell Parametric



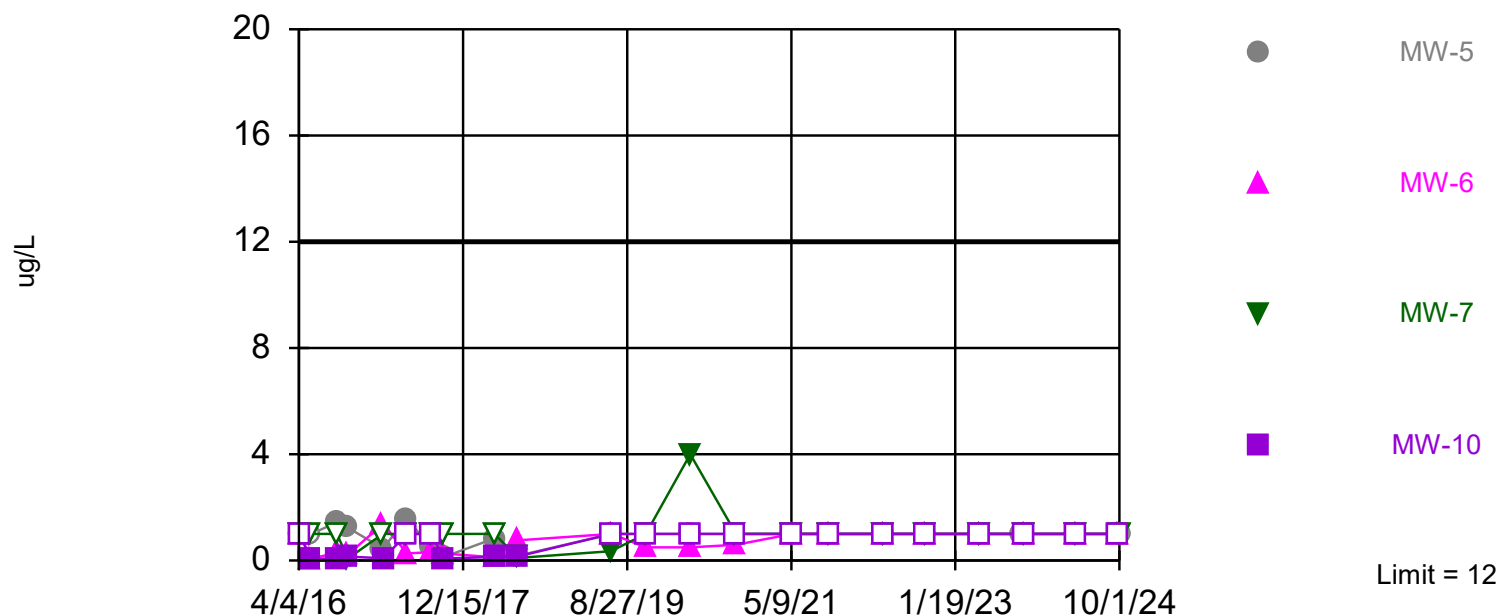
Background Data Summary (based on natural log transformation): Mean=-1.298, Std. Dev.=0.1959, n=21. Insufficient data to test for seasonality; not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9089, critical = 0.908. Report alpha = 0.0394. Individual comparison alpha = 0.01. Most recent point for each compliance well compared to limit. EPA 1989 outlier screening was performed on the background data. Three background outliers were removed: 1.21 (10/12/2017); <2 (9/26/2022); <2 (4/26/2023). At least one background value was a statistical outlier but was below the user-set cutoff of 3 times the median.

Constituent: Fluoride Analysis Run 12/16/2024 12:28 PM View: BREC Wilson GW
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Within Limit

Prediction Limit

Interwell Non-parametric



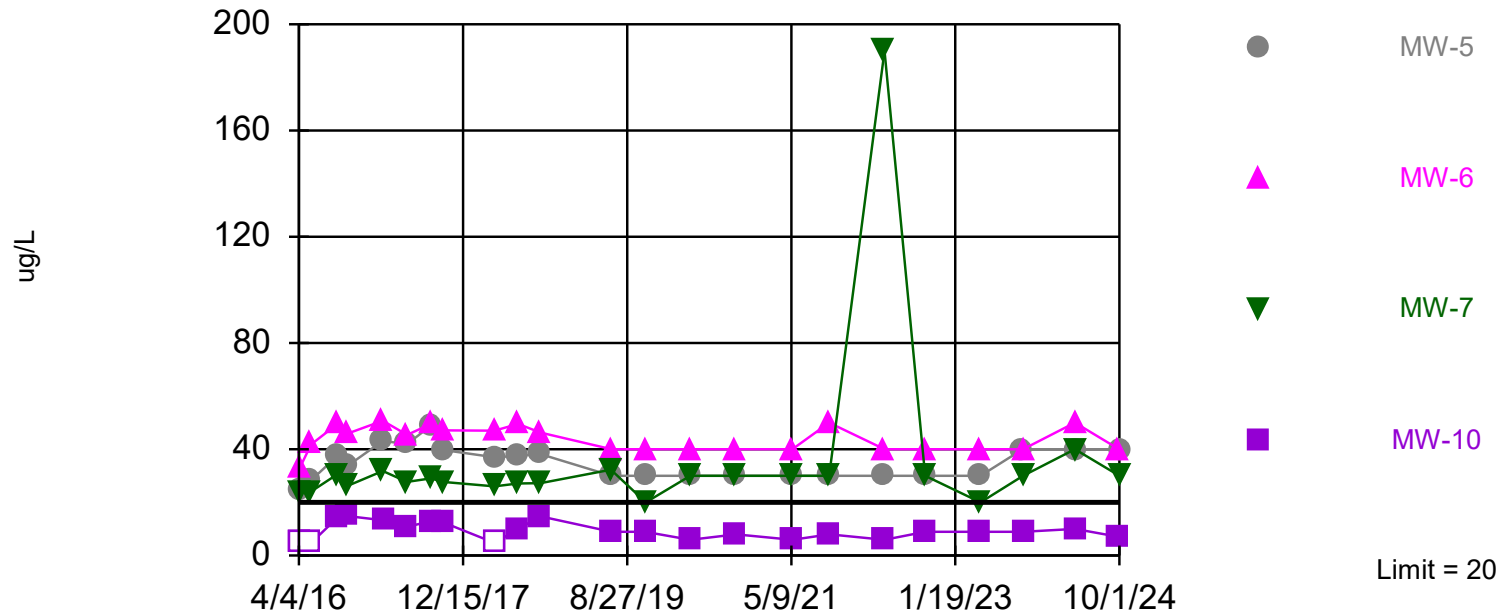
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 23 background values. 65.22% NDs. Report alpha = 0.1481. Individual comparison alpha = 0.03929. Most recent point for each compliance well compared to limit. After outlier removal distribution was non-normal, so outlier results were invalidated. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Lead Analysis Run 12/16/2024 12:28 PM View: BREC Wilson GW
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Exceeds Limit: MW-5, MW-6, MW-7

Prediction Limit

Interwell Non-parametric



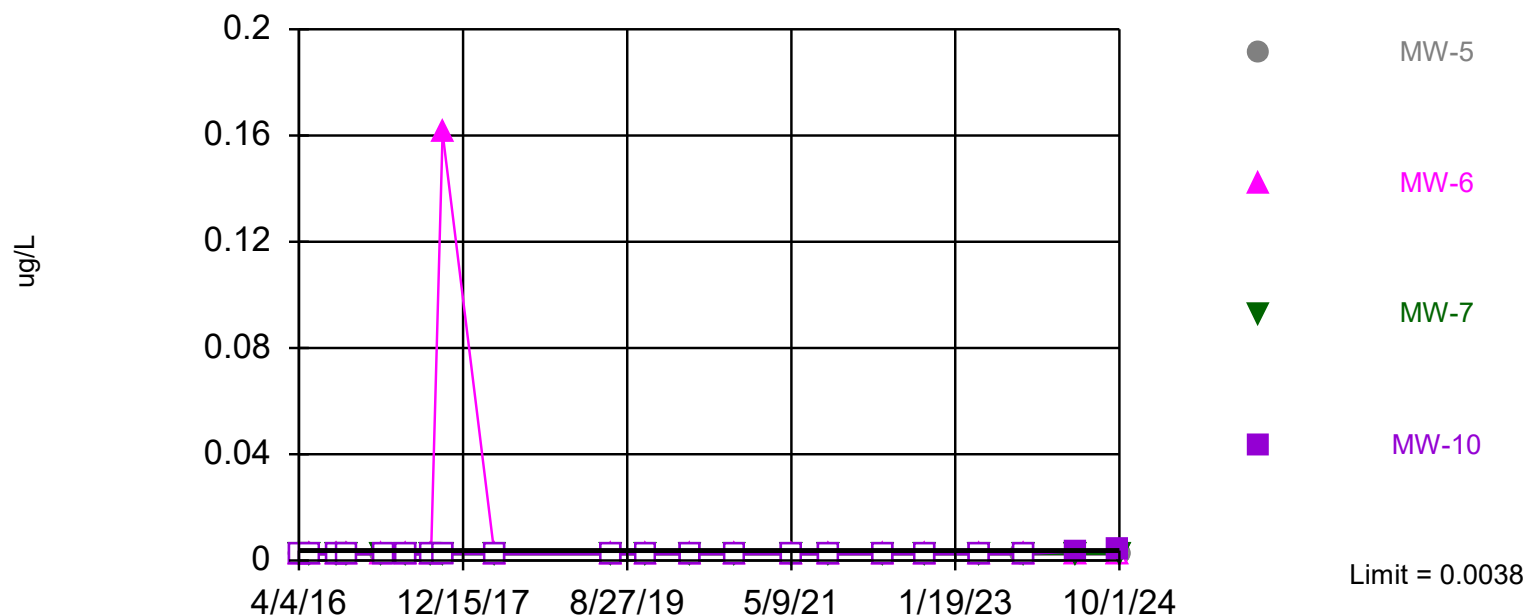
Non-parametric test used in lieu of parametric prediction limit because the data required both a power transformation and Cohen's adjustment. Limit is highest of 23 background values. 17.39% NDs. Report alpha = 0.1481. Individual comparison alpha = 0.03929. Most recent point for each compliance well compared to limit. EPA 1989 outlier screening was performed on the background data. No background outliers were found. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Lithium Analysis Run 12/16/2024 12:28 PM View: BREC Wilson GW
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Exceeds Limit: MW-10

Prediction Limit

Interwell Non-parametric



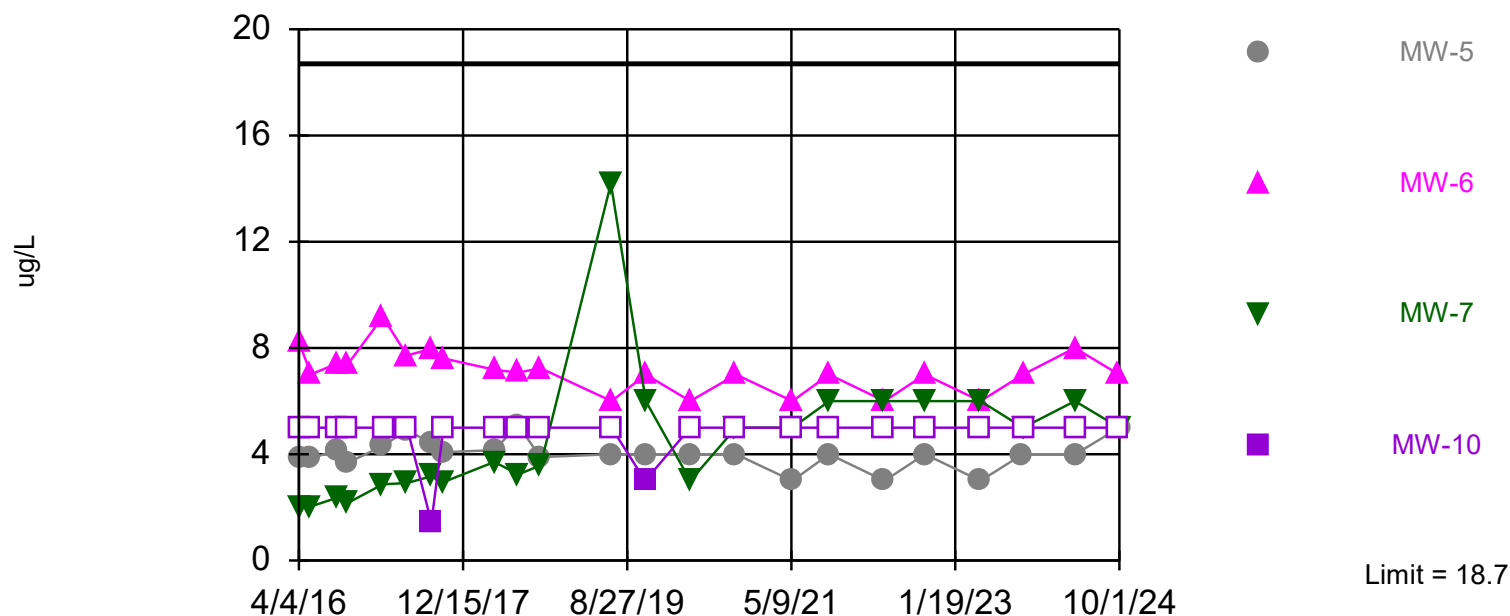
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 22 background values. 95.45% NDs. Report alpha = 0.1538. Individual comparison alpha = 0.0409. Most recent point for each compliance well compared to limit. Distribution was found to be non-normal after removal of suspect values, so outliers could not be identified. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Mercury Analysis Run 12/16/2024 12:28 PM View: BREC Wilson GW
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 23 background values. Report alpha = 0.1481. Individual comparison alpha = 0.03929. Most recent point for each compliance well compared to limit. Distribution was found to be non-normal after removal of suspect values, so outliers could not be identified. Insufficient data to test for seasonality; data will not be deseasonalized.

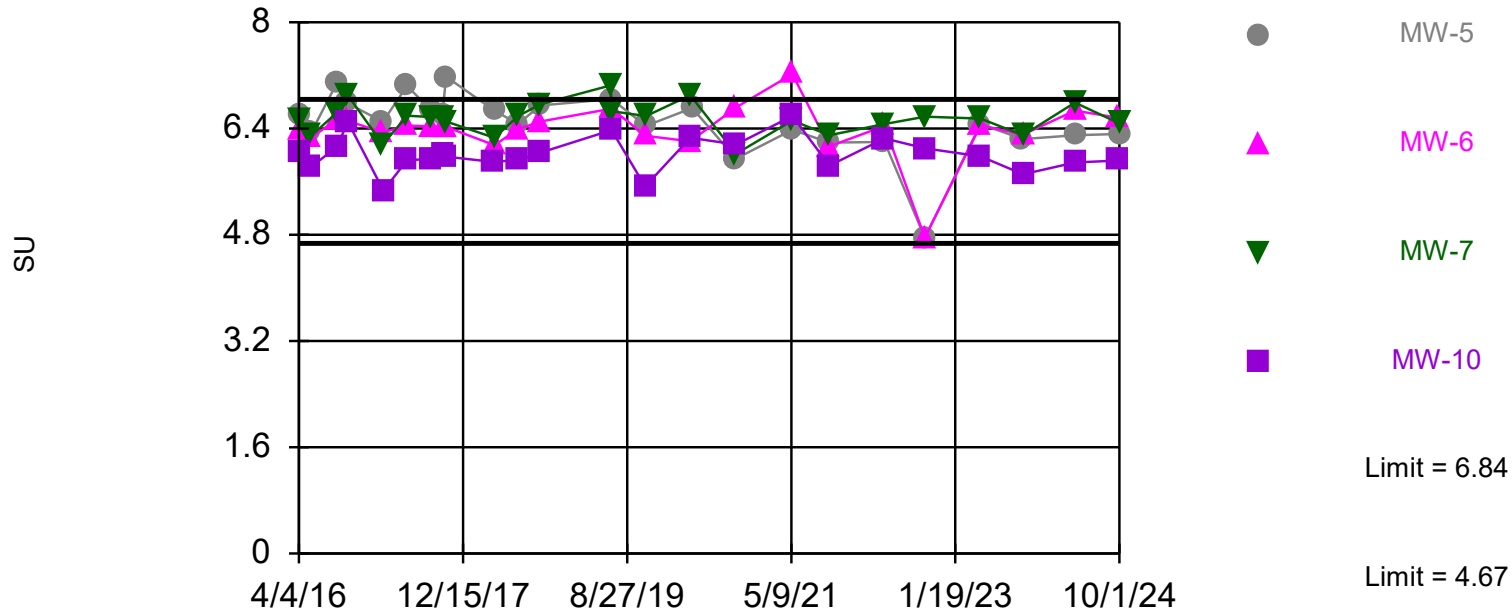
Constituent: Molybdenum Analysis Run 12/16/2024 12:28 PM View: BREC Wilson GW

Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Within Limits

Prediction Limit

Interwell Non-parametric



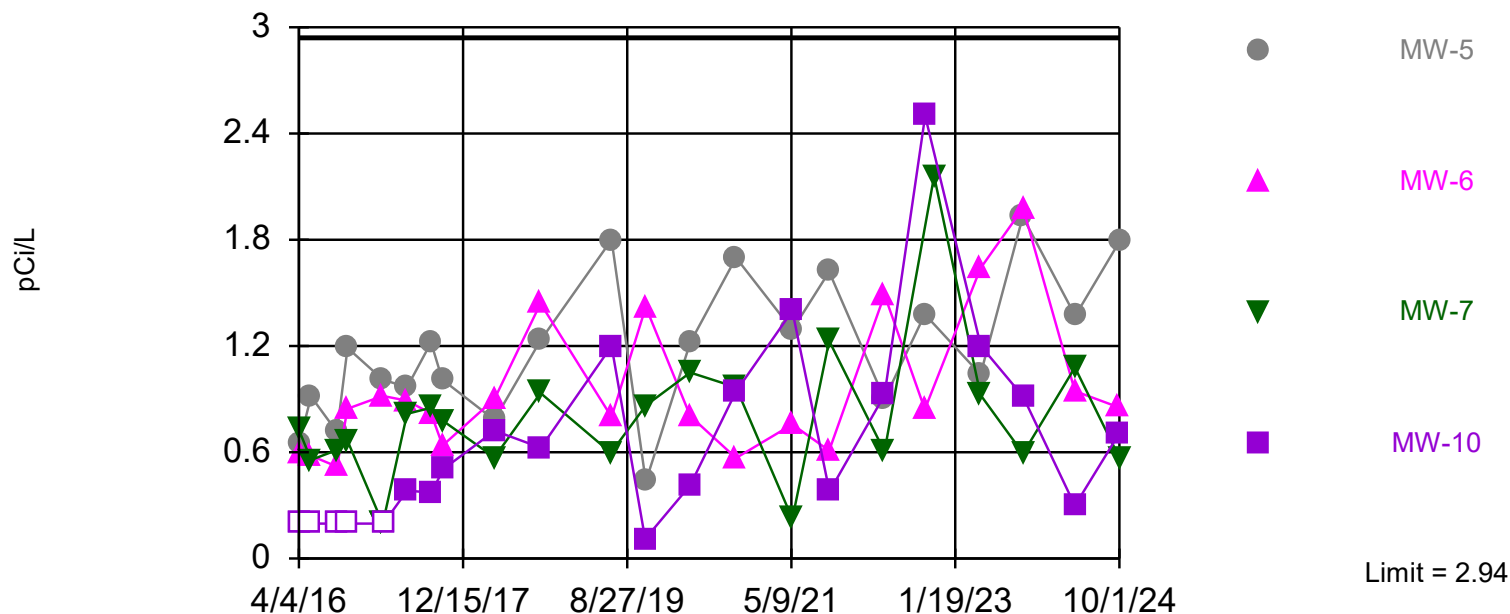
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limits are highest and lowest of 23 background values. Report alpha = 0.2963. Individual comparison alpha = 0.07859. Most recent point for each compliance well compared to limit. Distribution was found to be non-normal after removal of suspect values, so outliers could not be identified. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: pH Analysis Run 12/16/2024 12:28 PM View: BREC Wilson GW
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 22 background values. Report alpha = 0.1538. Individual comparison alpha = 0.0409. Most recent point for each compliance well compared to limit. After outlier removal distribution was non-normal, so outlier results were invalidated. Insufficient data to test for seasonality; data will not be deseasonalized.

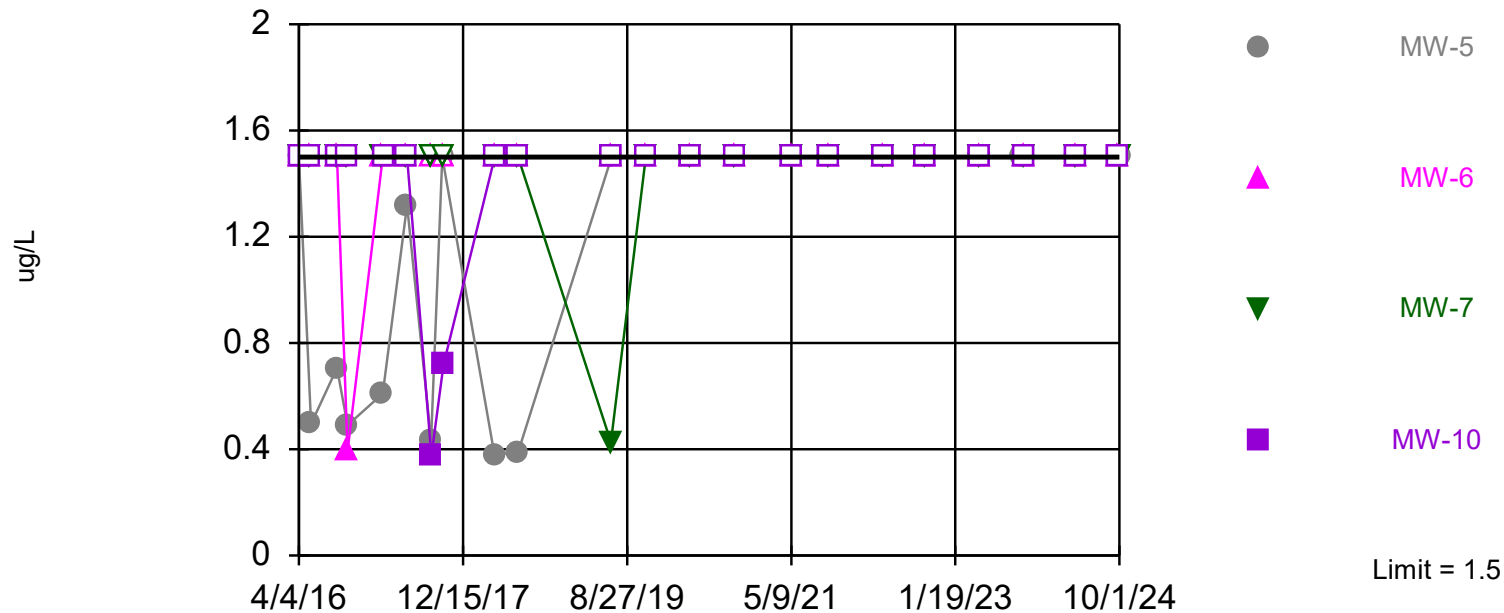
Constituent: Radium 226 + 228 Analysis Run 12/16/2024 12:28 PM View: BREC Wilson GW

Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Within Limit

Prediction Limit

Interwell Non-parametric



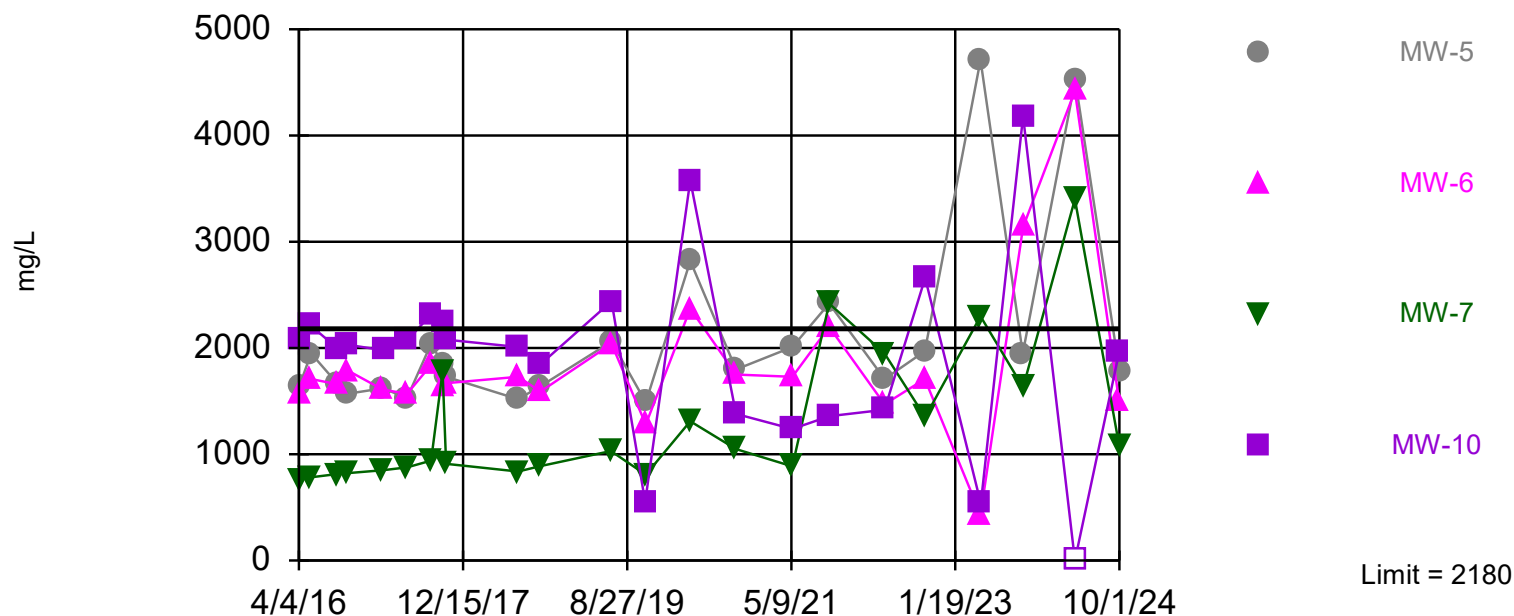
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 22 background values. 90.91% NDs. Report alpha = 0.1538. Individual comparison alpha = 0.0409. Most recent point for each compliance well compared to limit. After outlier removal distribution was non-normal, so outlier results were invalidated. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Selenium Analysis Run 12/16/2024 12:28 PM View: BREC Wilson GW
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Within Limit

Prediction Limit

Interwell Non-parametric



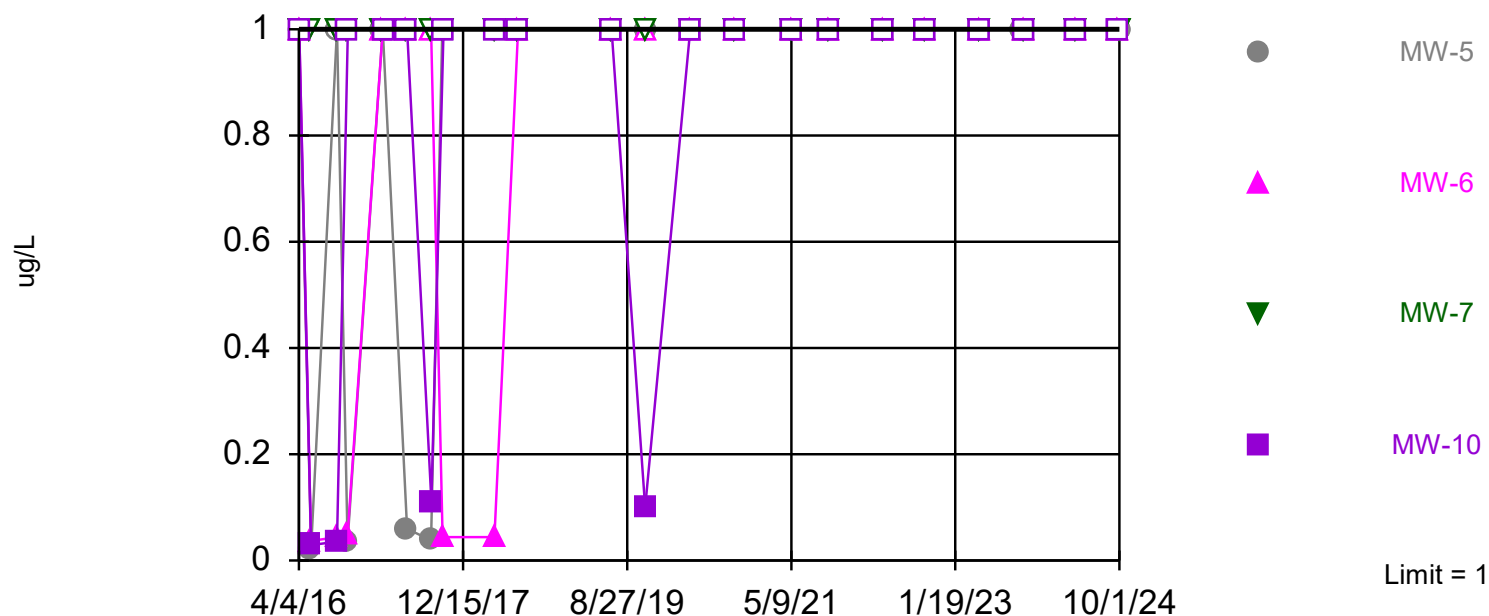
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 24 background values. Report alpha = 0.1429. Individual comparison alpha = 0.0378. Most recent point for each compliance well compared to limit. Distribution was found to be non-normal after removal of suspect values, so outliers could not be identified. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Sulfate Analysis Run 12/16/2024 12:28 PM View: BREC Wilson GW
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Within Limit

Prediction Limit

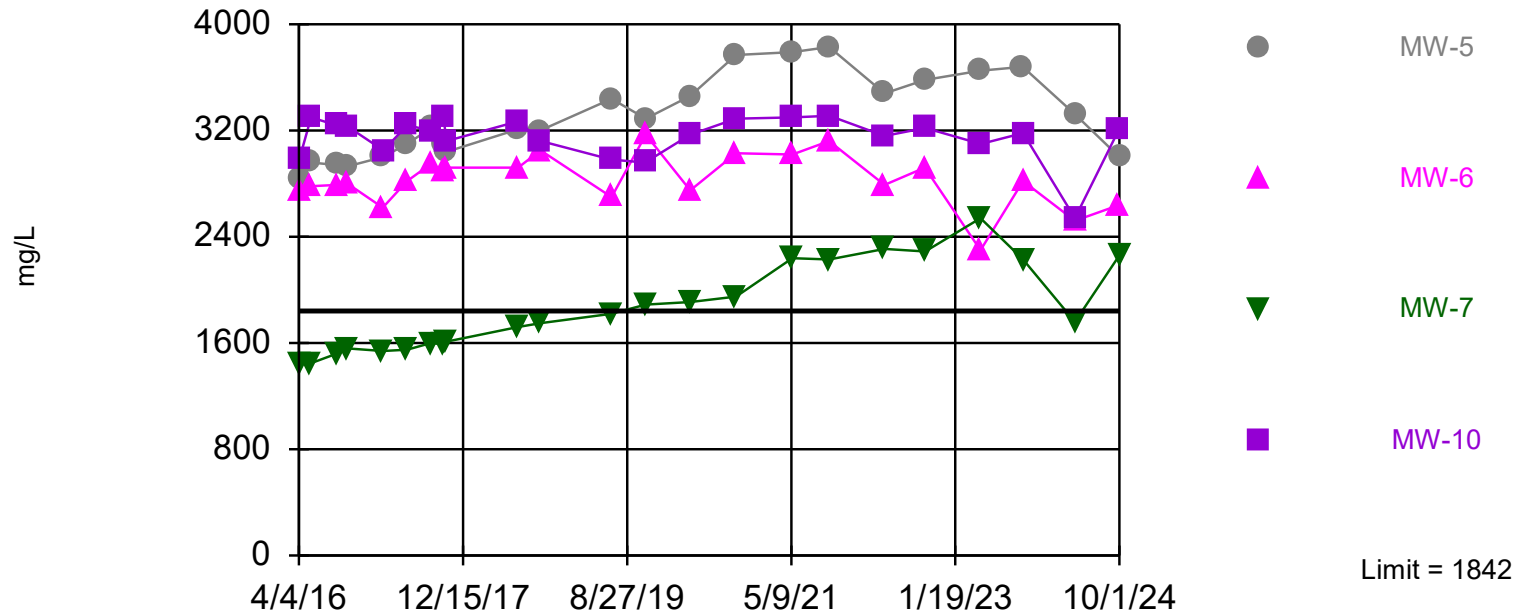
Interwell Non-parametric



Exceeds Limit: MW-5, MW-6, MW-7, MW-10

Prediction Limit

Interwell Parametric



Background Data Summary (based on square transformation): Mean=2380588, Std. Dev.=396693, n=24. Insufficient data to test for seasonality; not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9306, critical = 0.916. Report alpha = 0.0394. Individual comparison alpha = 0.01. Most recent point for each compliance well compared to limit. Distribution was found to be non-normal after removal of suspect values, so outliers could not be identified.

Constituent: Total Dissolved Solids Analysis Run 12/16/2024 12:28 PM View: BREC Wilson GW

Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Confidence Interval

Big Rivers Electric Corp.

Client: Burns & McDonnell

Data: BREC Wilson_Datafile

Printed 12/16/2024, 1:35 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Cobalt (ug/L)	MW-5	7.603	6.528	9	No	23	0	No	0.05	Param.
Cobalt (ug/L)	MW-6	7.574	6.898	9	No	23	0	No	0.05	Param.
Cobalt (ug/L)	MW-7	4.54	2	9	No	23	43.48	No	0.05	NP (normality)
Cobalt (ug/L)	MW-8 (bg)	2	1.18	9	No	23	47.83	No	0.05	NP (normality)
Cobalt (ug/L)	MW-10	104	80.92	9	Yes	23	0	No	0.05	Param.
Lithium (ug/L)	MW-5	36.98	32.62	40	No	23	0	No	0.05	Param.
Lithium (ug/L)	MW-6	47	40	40	No	23	0	No	0.05	NP (normality)
Lithium (ug/L)	MW-7	30	27.3	40	No	23	0	No	0.05	NP (normality)
Lithium (ug/L)	MW-8 (bg)	12.04	9.364	40	No	23	17.39	No	0.05	Param.
Lithium (ug/L)	MW-10	10.45	8.141	40	No	23	13.04	No	0.05	Param.
Mercury (ug/L)	MW-5	0.0025	0.0025	2	No	21	100	No	0.05	NP (NDs)
Mercury (ug/L)	MW-6	0.0025	0.0025	2	No	21	95.24	No	0.05	NP (NDs)
Mercury (ug/L)	MW-7	0.0025	0.0025	2	No	21	100	No	0.05	NP (NDs)
Mercury (ug/L)	MW-8 (bg)	0.0025	0.0025	2	No	22	95.45	No	0.05	NP (NDs)
Mercury (ug/L)	MW-10	0.0034	0.0025	2	No	21	90.48	No	0.05	NP (NDs)

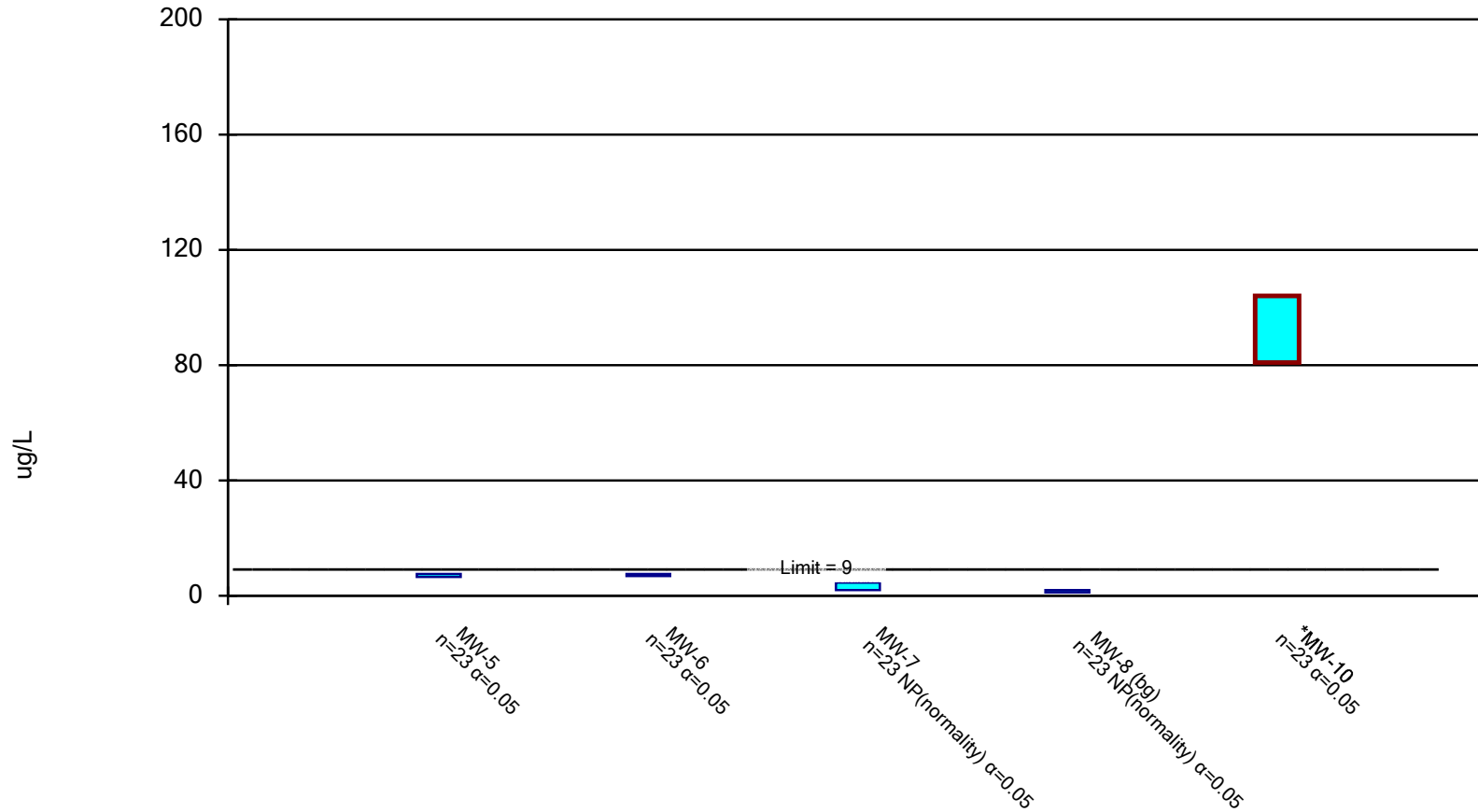
Confidence Interval

Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile Printed 12/16/2024, 1:35 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Cobalt (ug/L)	MW-10	104	80.92	9	Yes	23	0	No	0.05	Param.

Parametric and Non-Parametric (NP) Confidence Interval

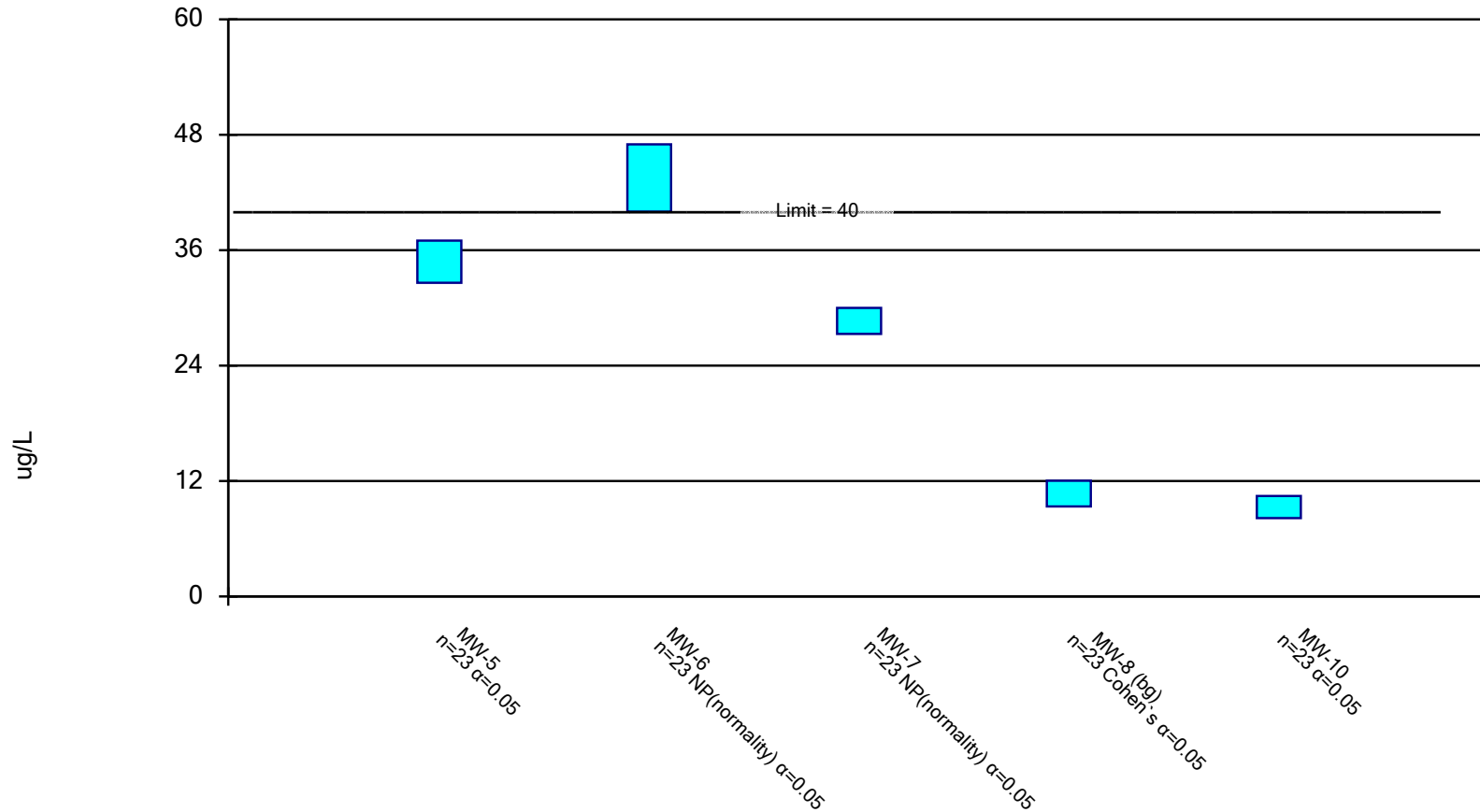
Compliance limit is exceeded.* Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 12/16/2024 1:34 PM View: BREC Wilson GW
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Parametric and Non-Parametric (NP) Confidence Interval

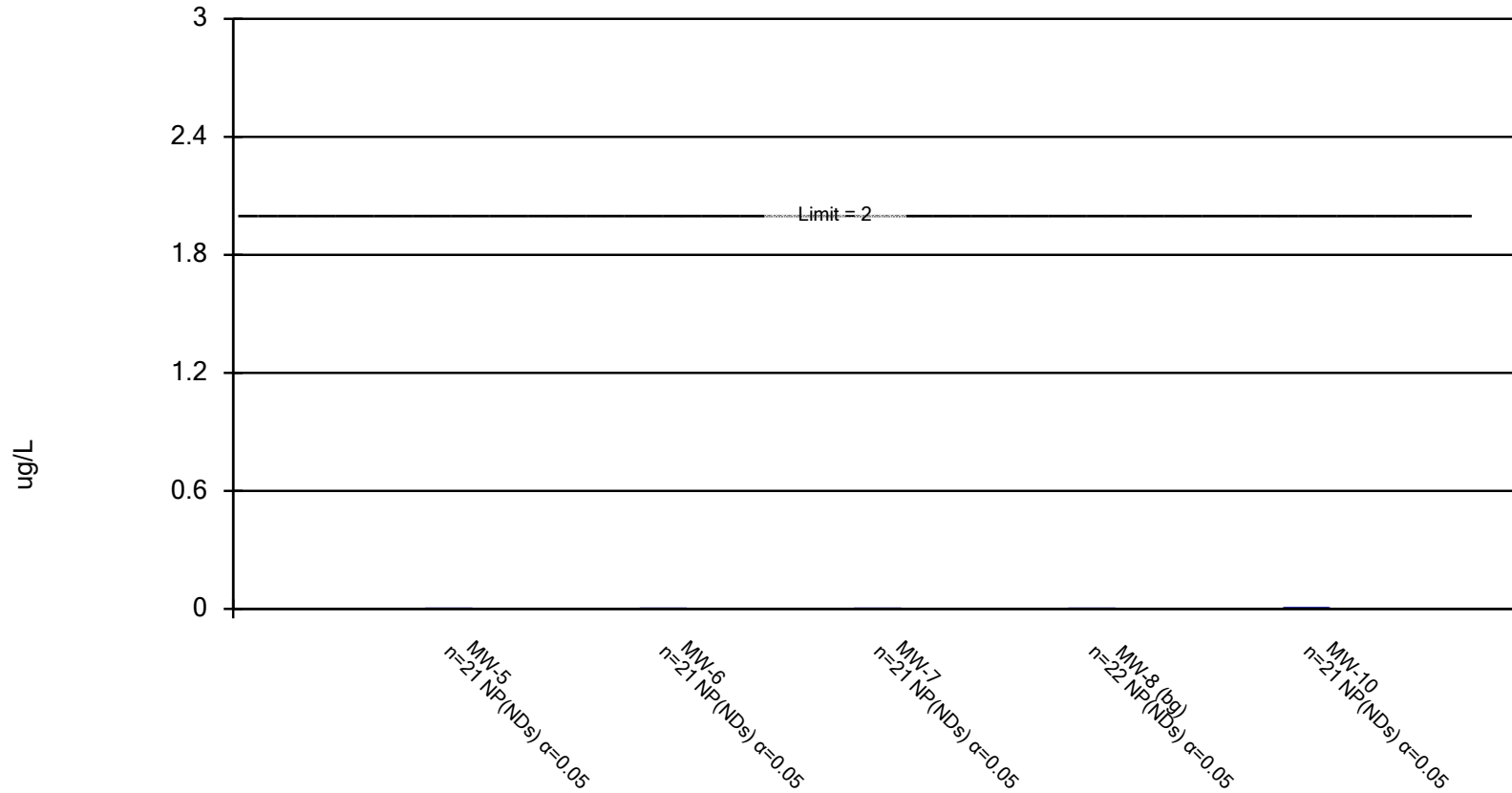
Compliance Limit is not exceeded. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 12/16/2024 1:34 PM View: BREC Wilson GW
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



Constituent: Mercury Analysis Run 12/16/2024 1:34 PM View: BREC Wilson GW
Big Rivers Electric Corp. Client: Burns & McDonnell Data: BREC Wilson_Datafile

